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ABSTRACT

The following 26 papers, with abstracts and references, are included in these proceedings: "Panel: Continuing Professional Education in Cooperative Extension" (Robert L. Bruce, G. L. Carter, Jr., Ronald Jimmerson, Joan S. Thomson); "New Farm Families: Implications for Extension Educators" (Jane W. McGonigal, Robert L. Bruce); "The Experience of Learning for the Sake of Learning in Adulthood" (Lynne Y. Asmuth); "Advances in the Neurosciences" (Marcie Boucouvalas); "Normative and Predictive Generalizations in Adult Education Research" (Robert F. Carbone); "Beginning Researchers' Perspectives and Approaches to the Planning Phase of Research" (Jennifer Knowles, Ronald Jimmerson); "Integrating Andragogy with Current Research on Teaching Effectiveness" (Billy E. Ross); "Adult Education vs. Education of Adults" (Harold W. Stubblefield); "Learning Opportunities for Volunteers" (Phyllis C. Wiederhoeft); "A Self-Directed Learning Program within Continuing Professional Education" (Judith K. DeJoy, Helen Mills); "Retirement Planning" (Shirley L. Foutz); "A Matrix Approach to Market Segmentation and Positioning for Continuing Professional Education Program Development" (Mary Elaine Kiener); "Continuing Education for University Faculty Members" (Susan F. Kromholz, Sally M. Johnstone); "The Municipal Clerk" (Michael T. Lavin, Donald Levitan); "A Long-Term, Multiple Stage Needs Assessment Process for Program Development" (Joan L. Parrett, Deborah R. Klevans); "Weekend Colleges in the United States" (Jeanie Roundtree-Wyly, Lloyd Korhonen); "Conducting an Effective Retention Study" (Dolores F. Sapienza, Richard S. Davis); "Educational Services to Isolated Locations Using State of the Art Technology" (Joseph D. Smith, David Halfen); "Development of a National Manpower Plan for the Malawi Ministry of Agriculture" (Thomas F. Trail); "The Metamorphoses of Adult Learners" (Dennis E. Campbell); "Use of the KAI [Kirton Adaption Innovation Inventory] in Times of Program and Organizational Change" (Shirley H. Gerken); "Understanding Adult Reentry as a Change Process" (Doe Hentschel); "Self-Reliant Behaviors and Value Orientations of Adult Learners Engaged in Continuing Professional Education" (Carroll A. Londoner, Fredric Linder, David Bauer); "The Influence of Adult Students on Faculty as Learners" (Barbara Rich); "Comparing Agricultural Extension Systems" (William M. Rivera); and "Learning To Think in Service of Improving Professional Practice" (Albert K. Wiswell). (KC)

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LIFELONG LEARNING RESEARCH CONFERENCE PROCEEDINGS

February 25 and 26, 1988

CENTER FOR PROFESSIONAL DEVELOPMENT
THE UNIVERSITY OF MARYLAND UNIVERSITY COLLEGE

AND

DEPARTMENT OF AGRICULTURAL & EXTENSION EDUCATION
THE UNIVERSITY OF MARYLAND, COLLEGE PARK

COMPILED AND EDITED BY
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RESEARCH CONFERENCE
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February 25 and 26, 1988

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and

Department of Agricultural & Extension Education
The University of Maryland, College Park

Compiled and Edited By
William M. Rivera
Cynthia Davis

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PREFACE

This publication is a report of the proceedings of the Ninth Annual (1988) Lifelong Learning Research Conference held at The University of Maryland in College Park, Maryland on February 25 and 26, 1988. The conference focus on continuing education for professionals grew out of a concern with problems in this region and the need to facilitate dialogue between researchers and practitioners involved with the resolution of these problems. Papers dealt with adult learning theory and learning styles, with international training and development, with program development in the field of continuing professional education, and with adult change on both a social and an institutional level.

This conference was originally designed to build interagency linkages in the region but has developed a national reputation. Sponsoring agencies include The Learning Resources Network (LERN), the American Association for Adult and Continuing Education, and the Adult and Community Education Branch Division of Instruction, Maryland State. Agencies which helped to facilitate the conference include the American Council on Education, the Maryland Association of Adult, Community, and Continuing Education, the Virginia Association for Adult & Continuing Education, and the Metropolitan Association for Adult and Continuing Education. The papers presented were selected "blind" by a selection committee that reviewed over 80 abstracts. The committee included representatives from The University of Maryland, Virginia Polytech, the American Council on Adult Education, the University of Buffalo, Maryland Cooperative Extension Service, Cecil County, and the International Development and Management Center at The University of Maryland.

A major goal of the conference was to bridge the gap between theory and practice by providing a mechanism through which researchers and practitioners could share their concerns. The conference had an interdisciplinary focus, bringing together people with different academic backgrounds who share similar concerns with lifelong learning issues.

The abstracts published in these proceedings were reproduced directly from copy provided by the authors. The authors' names and addresses are listed at the bottom of the first page of each abstract. If you desire more information, please correspond directly with them.

NOTE: Additional copies of the proceedings may be purchased. Send a check for $17.00 (payable to **The University of Maryland**) to: Proceedings LLRC, Center for Professional Development, The University of Maryland University College, University Boulevard at Adelphi Road, College Park, MD 20742-1668.

THE LIFELONG LEARNING RESEARCH CONFERENCE WAS ORGANIZED BY:

Department of Agricultural and Extension Education

The Department of Agricultural and Extension Education, The University of Maryland, College Park, is a multidisciplinary department featuring graduate programs in Adult, Continuing, and Extension Education. With a graduate faculty membership of twelve, the Department has specialties and interests in international education, community development, youth education programs, leadership development, environmental education, community services, and teacher education in agriculture. The Department has traditionally maintained close working relationships with the Federal Extension Service, US Office of Education, the National 4-H Center, the National FFA Center and the Maryland State Department of Education. In addition to the Adult, Continuing, and Extension Education Graduate Program, graduate programs in Community Development and Rural Sociology, Environmental Education and Agricultural Education are offered along with an undergraduate teacher education program in agriculture. For further details write: Department of Agricultural and Extension Education, The University of Maryland, Room 0220, Symons Hall, College Park, MD 20742.

The University of Maryland University College Center for Professional Development

The Center for Professional Development (CPD), a unit of The University of Maryland University College, draws upon resources within and outside The University of Maryland system to design, develop, market, and conduct a wide variety of university-level non-credit programs. As a highly experienced catalyst, it acts to link clients who need state-of-the-art professional education and training with relevant, practitioner oriented, high quality instructional resources and programs. Instruction is provided by instructors selected for their timely, practical knowledge, and their ability to communicate. The Center can advise on and/or provide assistance with program planning and design, budgetary and financial management, marketing, program administration and program coordination/delivery. Additionally, the Center has the capacity to design programs tailored to the needs of a specific organization and can offer courses at organizational locations.

Maryland Cooperative Extension Service

As part of the total University, the Cooperative Extension Service takes The University of Maryland to the people of Maryland, wherever they are. In its role as the "off-campus, non-credit, out-of-classroom" arm of the University, it extends the classroom to all parts of the State. The Maryland Cooperative Extension Service is known for its programs in agriculture (including care of urban home ground and gardens) home economics, 4-H and youth, community and resource development, and marine science. Off-campus faculty are located in each county and in Baltimore City. Joint support comes from the federal government for both 1862 and 1890 Land Grant institutions; and from the State and all 23 counties and Baltimore City in Maryland. General administration offices of the Maryland Cooperative Extension Service are located at the College Park campus, and the administration of the 1890 program (an integral part of the total MCES effort) is from offices of The University of Maryland Eastern Shore campus at Princess Anne.

SPONSORS INCLUDE:

Learning Resources Network

The Learning Resources Network (LERN) is a national organization which provides information and technical assistance to adults and continuing education programs. Services include the newsletters "Adult and Continuing Education Today", "Dean and Director", and "Course Trends". LERN also provides a series of publications and seminars dealing with the development and marketing of continuing education courses. LERN holds a national conference each fall, as well as a summer institute at Madison, Wisconsin, and a spring retreat which deals with issues in lifelong learning.

Adult and Community Education Branch Division of Instruction, Maryland State

The Adult and Community Education Branch, part of the Division of Instruction, is responsible for the establishment and maintenance of federal and state-funded programs in adult and community education. The mission of the Branch is to enhance and expand adult and community education offerings in the state of Maryland. This is accomplished through evaluation processes, research, and dissemination. Program areas include Adult Basic Education, Adult General Education, GED Instructional programs, External Diploma programs, Evening High School, School-Community Centers Program, the Multi-Service Community Centers, and Volunteer Programs. The branch office is located at the Maryland State Department of Education Headquarters, 200 W Baltimore Street, Baltimore, MD 21201.

American Association for Adult and Continuing Education

The American Association for Adult and Continuing Education (AAACE) was founded on November 12, 1982, at the National Adult Education Conference in San Antonio, Texas, as a result of the consolidation of the Adult Education Association of the USA (AEA) and the National Association for Public Continuing and Adult Education (NAPCAE). These associations served members and the public for over 30 years and this historical consolidation has united over 6,000 members and subscribers.

The purpose of AAACE is to provide leadership in advancing the education of adults in the lifelong learning process. This goal is achieved by unifying the professional, developing and utilizing human resources, encouraging and using research, communicating with the public and individual and institutional association members, offering numerous member services and publications, and otherwise furthering the multiple causes of adult and continuing education.

AAACE's professional journal, Lifelong Learning, published eight times per year, offers authoritative articles covering current trends and issues in adult and continuing education. The journal keeps readers up-to-date on new books, innovative instructional strategies, and practical applications of research in adult education. AAACE also publishes Adult Education Quarterly, the major research and theory journal in the field. Its in-depth articles on research and evaluation provide a vital tool for professors, students, and researchers. In addition, each member of the Association receives the AAACE Newsletter, published ten times per year. The Newsletter reports on developments in national and state legislation, innovative programs, conferences, job announcements, and people-in-the-news.

Each fall the AAACE in concert with a state affiliate association sponsors and conducts the largest adult education conference in the US. It also co-sponsors state affiliate regional conferences, and several regional seminars and workshops.

FACILITATORS INCLUDE:

American Council on Education

The American Council on Education (ACE), founded in 1918 is the nation's major coordinating body and principal voice for postsecondary education. It is an independent, comprehensive, voluntary association that is dedicated to the improvement of American postsecondary education. In cooperation with other associations, it serves as the focus of discussion and decision-making on education issues of national importance. Composed of more than 1,600 postsecondary institutions and national and regional organizations, ACE has a thirty-seven member board of directors representing the diversity of American postsecondary education.

The Council acts as a coordinating body among national and regional education associations, while providing national leadership in cooperation with others, for improving standards, policies, programs, and services for postsecondary education; provides national leadership on equality issues for women, minorities, and older students in higher education; coordinates self-regulation initiatives; offers technical information and advice on access for the handicapped; works with other associations in representing higher education to the federal government; sponsors seminars to help presidents and other administrators improve management and leadership, offers a fellowship program to strengthen academic administrative leadership, and conducts national identification programs for the administrative advancement of women and minorities in higher education; facilitates access to higher education by evaluating and establishing credit recommendations for noncollegiate learning in the military, corporations, government agencies, labor unions, and associations; operates the General Education Development (GED) Testing Service, which provides adults who have not graduated from high school with an opportunity to earn a high school credential; and coordinates activities on international education issues.

The Maryland Association of Adult, Community, and Continuing Education

The Maryland Association of Adult, Community, and Continuing Education (MAACCE) is a professional association representing adult educators in the state of Maryland. MAACCE is the result of a merger of MAAE, MAPSE, and MACE in January, 1983, and is the Maryland affiliate of AAACE. MAACCE provides a variety of activities and interest areas for adult education in public schools, colleges and universities, hospitals, correctional institutions, community organizations, government agencies, cooperative extension, and business and industry through its five divisions: adult education, community education, continuing education, correctional education, and literacy. An annual conference, several regional workshops, and three different publications are available to members, as well as a directory of consultants and an active legislative information network.

Virginia Association for Adult & Continuing Education

The Virginia Association of Adult & Continuing Education, a vital, dynamic association of thirty years' standing, is a comprehensive organization of individuals whose occupations and interests influence the education and training of adults. Membership (currently in excess of 200) includes educators from public and private schools, colleges, the military, and governmental agencies. The VAACE is committed to working for greater individual growth, a better Virginia and a better nation by encouraging, stimulating, and extending the continuing education of its members and others throughout the state.

Metropolitan Washington Association for Adult and Continuing Education

The Metropolitan Washington Association for Adult and Continuing Education (MWAACE) sponsors programs and activities for the professional growth of its members who believe that education is a lifelong learning process and that adult and continuing education is integral to that process.

MWAACE's unique position as an affiliate of the American Association for Adult and Continuing Education (AAACE) in the nation's Capitol enables its agenda to encompass international, national, and local professional interests.

Therefore, its primary objectives are: to examine the dynamics of adult and continuing education; to access the remarkable resources in the area; to disseminate information to its members; and to offer our professional expertise to the membership and the community. For further information, write: MWAACE, P. O. Box 44044, Washington, DC 20026-4044.

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CONTINUING PROFESSIONAL EDUCATION IN COOPERATIVE EXTENSION

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Abstract

The audiences served by Cooperative Extension are becoming more differentiated, its research base more fundamental, and the information it conveys more complex. As it adjusts to these changes in its environment, Extension must develop effective programs of continuing professional education based on a realistic assessment of needs and supported by workable and equitable systems of assessment and education.

THE SITUATIONAL CONTEXT

The changes that have taken place in the audiences Cooperative Extension serves and in the research base on which it relies have been slowly building pressure for a restructuring. There is increased differentiation in audience, in complexity of the problems addressed and in the information to be conveyed.

Audience and Knowledge Base

Extension still reaches many adults and young people like those who comprised the audience in 1911, but they are accompanied by a bewildering array of others -- high tech commercial farmers, agribusiness, government policy makers, leaders of volunteer agencies, etc. The complexity of the knowledge needed by these audiences varies, and so does their capacity to process it.

The research base which has always been Cooperative Extension's unique resource is also changing. Research at Land Grant universities is becoming more fundamental. This work is often far removed from application and indistinguishable, except for its home, from that being done in laboratories elsewhere. The people who do the research don't need -- and increasingly don't have -- background or interest in application.

The information emerging from this research is often readily understood and used by only a small fraction of the potential audience, and needs informed interpretation and application for the rest. Since this research is also costly, and institutions doing it must specialize, the information yielded is also incomplete and must be supplemented with information from other sources if problems are to be addressed "in the round."

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Staffing Needs

Extension professionals must provide greater depth of subject matter to those parts of the audience who need, and can use, that depth. At the same time, diagnosis of problems, identification of information needs, and synthesis of information so that it addresses whole problems calls for a high order of generalizing ability to accompany that information content. These two critical needs may be met partly through future recruitment, but much will depend on retraining present staff.

It is difficult to estimate with real accuracy the dimensions of the task involved. But an approximation is possible by looking at the group of field staff who have greater than 5 years in the system (and are thus least likely to move elsewhere) and are under 55 years of age (and thus least likely to retire soon). The relevant information for New York State is shown in Table 1.

Table 1. Terminal degrees held by Cornell Cooperative Extension field staff under 55 years of age, and with more than 5 years of service.

Program Area/ Age	No.	BS/ BA	MS/ MPS	EDD PHD
50-54	22	12	10	0
45-49	30	13	17	0
40-44	56	22	33	1
35-39	49	25	24	0
30-34	37	28	9	0
25-29	10	10	0	0
TOTAL	204	110	93	1

Of the 204 members of this group, more than half (110) have bachelors degrees, a level of preparation that is almost certainly unlikely to support a subject-matter specialization and, unless augmented with considerable relevant experience or in-service education, also inadequate for a really competent generalist/program manager. The professional development needs of many of these extension workers can be met through advanced degree programs. Some are too far along in their careers, however, for study toward a graduate degree to be an efficient route to the needed proficiency. For others, the needed competencies may not be readily available through graduate degree programs, or just as available from other sources. In every case, acquisition of the needed competencies will call for concentrated effort, either in graduate study, directed experience or informal study.

Four things are necessary to address these professional development needs: a realistic view of essential competencies, a systematic assessment and counselling program, a workable and equitable system for study leave -- for both degree and non-degree programs, and a carefully designed, closely coordinated and proactive program of in-service education targeted on staffing for 1995 or later.

KNOWLEDGE NEEDS

Content knowledge

Extension professionals should be knowledgeable in one or more areas of subject content relevant to their assignments, including information about current problems in the field, research efforts to deal with those problems, and where -- and by whom -- knowledge is being generated. They should be intellectually engaged and generally informed about research and the research process in a variety of fields, and able to analyze situations and problems in their content fields, including identifying relationships and trends, and establishing priorities of sequence and importance.

Becoming astute students

Extension educators must be "astute students of their work environment." This means they never know all they need to know, are constantly groping for additional insights, and are attentive and systematic observers. Being astute means skill at determining what to give attention to as they learn from their work. Astute students make their work situations laboratories for learning, as well as settings in which they provide assistance. They don't rely on preconceived, prescriptive answers, but look on each problem as having some element of newness, and sort out its significance, judging its potential impact on each situation.

As astute students, Extension professionals must learn to enable other adults to learn things useful to their own purposes, and must bridge between what is known and the problems of those who are to be helped. Creating such a bridge is no simple matter. This cannot be achieved adequately with a few skills acquired through apprenticeship training or a facility for "professing on" certain subjects. What is required is a mode of thinking that can be translated into modes of practice. Five areas of competence are essential; coping with the work environment, conducting systematic inquiry, programming, reckoning with human behavior and focusing on the professional.

Coping with the work environment. Extension professionals need to consider the milieu in which they function, both as environment and as an essential element of their instruction. They must not only understand a technology; they must be able to formulate ways of dealing with problems which involve a range of possible aspects of that technology. And technology is not the only significant aspect of the extension educators' work environment. Social systems affect what they are able to accomplish. Nor can the economy or the political arena be ignored.

Systematic inquiry. Systematic disciplined inquiry does not come instinctively. We must learn how to formulate potentially "telling questions" and to devise the processes by which those questions can be pursued. Learning what others have concluded as a result of their inquiry doesn't prepare us to inquire. Becoming an astute inquirer involves acquiring a frame of mind as well as specific processes that can facilitate inquiring. That inquiry should include the goals and aspirations of audiences, their previous experience and existing understanding, their potential, their resources, their proneness to risk taking, and the like.

Programming. Going beyond merely reacting to whatever comes to one's attention requires systematic programming -- the design of plans and strategies to facilitate learning. Extension professionals must learn skills and insights that will contribute to such a facility.

Human behavior. Extension professionals must learn to reckon with human behavior and understand human communications at a relatively sophisticated level. Intuition alone is not enough; systematic knowledge of human development and behavior are basic to understanding human communications and to helping people cope with their situations.

Focusing on the professional. Extension professionals function in a complex organization. Individual practitioners must be able to relate to the organization, to their colleagues, to their clientele in ways befitting a professional educator.

Focusing on personal growth and development.

To be truly educational, Extension must focus on personal growth and development of individuals. Other approaches can lead to change which benefits the already powerful rather than that which closes gaps between rich and poor, weak and powerful, haves and have nots.

An emphasis on personal growth and development of individuals and groups implies competency in helping people understand and direct change rather than adjust to it. It suggests (1) helping people recognize and gain confidence in their abilities, (2) clarify their values based on their life experiences, (3) making explicit their intuitive knowledge and understanding of the world, and (4) developing skills to allow them to direct change using information, technology, problem solving and issue analysis skills.

A personal growth emphasis implies professional skills in areas such as action research, personal growth education, organizational development, explanatory and experiential learning, multiplier programing and values education.

STAFF DEVELOPMENT

A human resource development program offers many potential benefits to Cooperative Extension. The acquisition of new knowledge and skills will allow the organization to better respond to the varied and changing demands of its changing clientele. Increased productivity can also result from internal mobility of workforce, employee satisfaction, congruence between individual goals and abilities and those of the organization, increased quality of work life and a better match of human resources to the needs of the organization.

It is tempting to equate "better staff" with "more people with advanced degrees." this is both simplistic and inefficient. Correctly identifying individual and system needs, however, and responding to them efficiently, calls for effective assessment and counselling and for a multifaceted program which includes a variety of formal study and direct experience.

Assessment and counselling.

Adequate and credible means of competency assessment and counselling are essential. Competence is not always reflected in an advanced degree, a smooth platform presence, or a capacity for making the right noises in the presence of administrators. Instead, we must be able to identify the qualities discussed above, or to diagnose their absence.

Effective specialization, for example, calls for more than expressed interest or even past allocation of effort. At the same time, real competency -- even when not backed by formal academic credentials -- should be recognized, enhanced and rewarded. Both concerns call for an assessment system that looks at a range of competencies and needs. Such a system is described by Smith and Clark (Smith and Clark, 1987) in a recent issue of the Journal of Extension.

Good record keeping is also essential. A Personal Development Record (PDR) for each employee provides a food opportunity to record relevant professional experiences and will provide a basis for counselling and the development of individual plans for professional improvement.

Educational responses.

In the past, Cooperative Extension has demonstrated a long-standing commitment to the continuing professional development of its staff and faculty through new staff orientation. in-service education, graduate education opportunities, study leaves, provision of library facilities, support for professional association activities, correspondence courses, conferences and workshops. All of these techniques will have value in the future, but changes or additions may be in order.

In-service education. Staff development opportunities are currently offered largely face-to-face at the state and/or regional levels. With an array of alternative educational delivery strategies available, these alternatives need to be evaluated and, when appropriate, adopted as means of delivering in-service and other educational experiences. State-wide computer networks, for example, may provide an effective means of communicating with and training staff in job-related responsibilities to enhance productivity.

Graduate study. We can expect an immediate demand for easily accessible Masters programs, as Extension attempts to "upgrade" its staff. This demand is likely to peak soon and then taper off, essentially ending in about 4-5 years, as the Masters becomes established as an entry-level degree. This need can be met through professional Master's degrees focusing on generalist skills for non-specializing agents, coupled with "minor packages" of professional courses for specialist agents, both to be offered in summer or extramurally. Maximum use should be made of courses from the "regular" programs, coupled with the use of qualified extension staff members as adjunct faculty.

Faculty development. Historically, Extension staff development has addressed the needs of field personnel. Today, with limited resources and independence of responsibilities within the College, opportunities for faculty revitalization are just as urgent. Such revitalization cuts across functional assignments in research, extension and instruction.

Well-qualified personnel with the capacity to grow and mature on the job and the ability to adjust to changing needs are imperative if Cooperative Extension is to accomplish its mission. Human resource issues must be considered as part of all program, personnel and resource discussions within Cooperative Extension, and an atmosphere for continuing professional development must pervade the entire organization.

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NEW FARM FAMILIES:
IMPLICATIONS FOR EXTENSION EDUCATORS

Jane W. McGonigal[1]

Robert L. Bruce[2]

Abstract

This study of New York State farm families has resulted in a database with extensive demographic, economic, employment and attitudinal information. Major transitions in family values, employment patterns and decision making call for new skills and understandings in Extension professionals.

RATIONALE

Farm families, with high integration of the family and the farm operation (Berkowitz & Perkins, 1984; Colman & Capener, 1986), have been viewed as stable, conservative and relatively unchanging (Brown, 1981). Recent studies have focused on their responses in coping with increased economic stress (Boss, 1987; Weigel & Weigel 1987; Harmelink, 1987; Davis-Brown & Salamon, 1987) including the subset of families who have exited farming (Heffernan & Heffernan, 1986; Graham, 1986).

The effects of economic, technical and social factors on farm families have implications for the families themselves and for their farming operations. Farm operations usually involve intricate interactions among the activities, incomes and aspirations of several family members. In times of economic difficulty, these interactions become even more critical. This study began in 1985, and has consisted of three phases, including both qualitative and quantitative methodologies.

METHODOLOGY

An exploratory needs survey was conducted with Cooperative Extension field staff and with research and extension faculty at Cornell to determine the assumptions about farm families held by these professionals and to identify data that would be most useful for program development.

Questionnaire Survey

A questionnaire sample of 1,500 New York State farm units was drawn by the New York State Department of Agriculture and Markets and was representative of farm units in each of the four annual gross sales categories.

The instrument, mailed in February 1986, used a modified mail survey technique, and generated 738 usable responses - a forty-nine percent rate of response. This rate is lower than projected for the Dillman technique unmodified (Dillman, 1978), but was nearly twice the response rate of other surveys generated from the same population. In addition, the sample population received the survey during the period in which farmers were being asked to decide whether or not to participate in the federal Whole Herd Buyout Program. Whether,

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(2)Robert L. Bruce, Professor of Extension Education, Cornell University or how, this major economic consideration affected the response rate and/or the responses to some of the questions is not known.

The returned questionnaires were coded and recorded using Lotus 1-2-3 and Excel spreadsheet software packages. The initial analysis of the data was generated to show total numbers, frequencies and comparisons to known state agricultural data such as size of operation, age and education level of the designated operator. These variable comparisons indicate that the respondents were representative of the total New York State farm units.

Indepth Interviews

An indepth interview guide was developed, based on the preliminary questionnaire data. Questions were developed to focus on decision-making patterns and trends in farm families, uses of income, formal and defacto partnership agreements, roles of spouses and children in the farm enterprise, and individual and family use of time for work and relaxation. Additional information on future intentions for the farm enterprise was gathered. The interview guide was tested with one family not in the survey sample and adjustments were made.

Using a pool of 100 families from the original sample, interview agreement were secured from 30 farm families representative of the sample with respect to enterprise and size of operation, and geographically dispersed throughout the state. Each family completed the initial survey questionnaire for use in comparison with the data from the mailed responses.

Thirty taped interviews -- carried out from October 1986 through March, 1987-- averaged 2 1/2 hours each. Both investigators participated in the first three interviews, after which the content and procedures were re-examined, before undertaking individual interviews. In 18 of the interviews family members from more than one generation were involved. In 25, siblings and spouses took part in the interview. Frequent consultation between investigators assured commonality and reliability of content.

PRELIMINARY FINDINGS

Farm households are predominately husband/wife/children although single parent households and those headed by widows or widowers were also found. Household/family sizes tend to reflect the smaller sizes present in the general population with an average of 3.38 total members, and 1.9 children per household. The data do not show the marital disruption levels of the general population, but family members indicated concern as to how divorce among younger farm couples could affect the future of the particular farm operation.

Education levels of respondents are higher than those of the general population. Most adults were at least high school graduates, and two or more years of college was the norm among the 20-40 year olds. Among the questionnaire respondents adult males averaged 13.0 years of education and adult females 13.2 years of education.

Farm Family/Household Data Including Economic and Employment Information

Two hundred sixty women on the 738 survey farms (30 percent) reported off-farm employment. Of these, 92 percent also reported on-farm labor/management responsibilities. Of the men reporting employment location, 187 (25 percent) indicated off-farm employment in addition to on-farm work, and 513 (68.9 percent) reported full-time on-farm employment.

Of the 30 interview families, 24 had a family member employed off-farm. (The interviews were carried out 9-12 months after the survey, while the agricultural situation continued to worsen, perhaps accounting for the difference in response.) The six interview families with no off-farm employment represented all farm categories and stage of the family cycle. Off-farm income was mixed in with farm income in all but five interview families, where it was reserved for family living expenses.

Farm families are highly dependent on off-farm income, and 89 percent reported that off-farm income was used for both farm and family expenses. Households are no longer self-sufficient, and, in many families, the farm alone is not profitable enough to provide necessary cash. A wife's off-farm income is frequently cited as allowing the farm to stay in business, or providing the security needed to support risk-taking decisions, such as enterprise changes.

Nearly 50 percent of the 30 families interviewed indicated that the future of their farm operation was very unclear (vs 28.6 percent of 634 questionnaire respondents). This uncertainty was due to the economic condition of the enterprise versus felt family needs and wants.

The farm labor and management contribution of family members is extensive. Of 308 sons 18 and under, 62.7 percent had farm responsibilities. Of 282 daughters 18 and under, 44.3 percent did on-farm work.

Decision-Making Involvement

The numbers of individuals participating in farm and household decisions has a wide range, with members from as many as three generations taking part. Both the type of involvement and the numbers involved ranges from minimal to highly extensive.

Minimal involvement families compartmentalize decisions with one person in charge of the farm and one of the home -- or even one person having final approval in decisions on farm, household and social activities, even where off-farm employment by a spouse allows an unprofitable farm operation to continue. More rarely, the operation is perceived as a business having an agricultural product, rather than as a farm family business.

The extensive involvement families interact much more frequently in the decision-making in all arenas. Members exchange responsibilities, undertake joint planning, know the farm business financial situation and are actively involved in decisions of resource allocation. Many farm women, especially younger spouses, had high involvement in both farm enterprise labor and management activities.

The decision-making style in farm operations where both spouses were involved appeared to have evolved by trial and error to an accepted pattern of shared and delegated decision-making. Change in the specific pattern in a family appears to occur only if the pattern of activity of family members changes, e.g. due to poor health, off-farm employment, death, divorce, retirement, increased responsibility of offspring, etc. There is an expectation that off-farm income used for the farm operation will result in shared decision-making about its use.

Family Values

The value of continuity was expressed among the interview families as well as by the 40 percent of the questionnaire respondents. Uncertainty over the future of the farm appears to be the basis for conflict among family members where issues of ownership in the next generation are unresolved. There appears to be a frequent lack of clearly articulated family and farm goals identified with plans for, and confidence in, their attainment.

Values relating to employment expectations reflect the influences of off-farm work experiences. There is a general expectation, particularly among the younger couples of multi-generational farm families, that pay for farm work is desirable and that norms of off-farm work benefits such as health insurance, vacation time, and separate housing, should be benefits of on-farm work also. Women (who are usually the only adults in the "unpaid family labor" category) express this more frequently if they are under 40 years of age. Children are usually paid for farm labor.

Partnership Agreements

Despite the verbal support given by farm families to the idea of the farm unit remaining in the family, only seven of the 30 interviewed families had developed formal partnerships. Of these partnerships the involvement of spouses was reported in three families; in only one of these three families was this a daughter-in-law. Defacto partnerships seem to exist in several other families, but in at least one, there appeared to be unresolved differences between the parents regarding inheritance rights for all of their children.

CONCLUSIONS AND IMPLICATIONS

These data indicate that farm families are in a transition from viewing the farm as owner/director of the family to that of the family as owner/director of the farm. Younger members -- both male and female --in multi-generational operations are pushing for more businesslike approaches to their involvement in the farming operation. There is less acceptance by his spouse, or by children and their spouses, of the male farm operator as an authoritarian patriarch.

Economic factors are not the only bases for decision-making. Time, and such values as personal development, continuity, consultation and consensus are frequently cited competitors.

Lack of previous farm experience by women marrying into farm families may result in expectations that conflict with the long hours, day-in day-out routine of farm (especially dairy farm) life. The income level, uncertainty, and lack of autonomy in the highly integrated farm/family operation are also possible causes for conflict with family members having more farm/family experience. The position of daughter-in-law in many farm families may be an increasingly difficult one with fewer and fewer young women willing (or able) to meet its expectations.

These findings suggest that extension professionals must not only update their assumptions about farm families, but to develop:

- interdisciplinary approaches that involve all family members.
- ability to recognize and deal with problems of communications, values clarification, goal setting and planning. These must move to a more equal footing with business management, production and home economics as crucial subject matter.
- recognition of and ability to respond to family needs and values in a variety of areas such as pay for farm work, provision of adequate health and life insurance, balancing work and family responsibilities and the economic impacts of operational decisions on the family.
- information and sensitivity to the issues involved in farm partnerships including verbal partnerships and unwritten agreements, with special concern for equitable treatment of family members.

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THE EXPERIENCE OF LEARNING FOR THE SAKE OF LEARNING IN ADULTHOOD

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Abstract

This study is a phenomenological exploration of the experience of learning for the sake of learning through the analysis of the transcribed interviews of ten adult subjects (co-researchers). They validated the individual and fundamental descriptions. Analysis showed that the experience is initiated and continued for enjoyment and to satisfy a curiosity and an addiction. The focus is on the process in which the learner "follows the flow." The learner seeks to increase the challenge, not reduce it. Implications for practice and research are presented.

This research dealt with one of the three learning orientations identified by Houle (1963). The learning-oriented learner was this researcher's initial interest, but the learner could not be identified until this learning experience itself was understood. The purpose of this study was to explore, to identify, to describe and to define the experience of learning for the sake of learning in adulthood. There were two specific research questions: 1. What is the experience of the phenomenon of learning for the sake of learning in adulthood? and 2. What is the meaning of this experience?

THE RESEARCH METHOD

Edmund Husserl (1970), a philosopher who felt that science needed to begin at the foundation of knowledge and not from assumptions about knowledge's roots, sought to find these roots by going "zum den Sachen selbst" (to the things themselves). To explore the phenomenon of the experience of learning for the sake of learning in adulthood one goes to its roots - the experience itself. The four step approach developed by Barritt, Beekman, Bleeker, and Mulderij (1983) was selected for this study. The four steps are: Obtaining the descriptions, reading and analyzing the descriptions, validating the descriptions, and developing and validating the fundamental description.

"Subjects" in phenomenal research are selected to supply first hand information about the phenomenon being studied. They are not representative of the population at large. The ten subjects were selected from those nominated by educators and subjects. These individuals are considered co-researchers rather than subjects because they participate with the researcher by providing the data and validating the individual and fundamental descriptions. These co-researchers were selected from those nominated by educators and other co-researchers.

Obtaining the Protocol

While descriptions may be obtained in several ways, tape recorded interviews were selected for this study because it would allow the co-researcher to speak at length about the experience without feeling constrained by time, fatigue, or feelings of inadequacies that might be involved in a request for a

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written protocol. Each co-researcher participated in two one-hour interviews. The tapes were transcribed and sent to each co-researcher to be approved or expanded as they thought necessary.

Analyzing the Protocol

After the co-researchers agreed that the transcripts accurately reflected their learning experiences, the analysis phase began. Each learner's transcript was analyzed separately in the order in which the interview occurred. The transcript was read and reread until the experience was understood from the co-researcher's viewpoint. The elements, characteristics that make the experience what it is, surfaced through these readings. These elements were labeled and like elements were grouped into common themes. Then statements that expressed each common theme were developed. These generalized statements explained to the reader the meaning of each theme group. These statements were used to develope each individual description of the experience. The generalized statements were expanded and comments from the learner added to explain particular facets of the learning incident. This description explicated the themes that emerged from the readings of each learner's transcript and was particular to that person's experience.

Validating the Individual Descriptions

At this point the co-researchers were sent their individual descriptions and asked to validate its accuracy. They were asked if the description was an accurate representation of their learning experience. They were asked to comment on and give suggestions that would more clearly explain their learning experience. They all concurred that their description was an accurate representation of their experience.

Developing the Fundamental Description

The Fundamental Description of the experience was developed from the ten validated descriptions. Its purpose is to give the reader an understanding of the phenomenon. This Fundamental Description began to develop as the last few protocols were analyzed since no new themes had emerged in protocols seven through ten. To be sure that the researcher was not falling into a natural attitude and getting lost as a researcher the paragraphs from the individual description were grouped by common themes and each was read several times. This analysis confirmed the earlier thought that an expansion of the last few individual descriptions would result in the Fundamental Description of the Phenomenon. A condensed Fundamental Description is presented below.

THE FUNDAMENTAL DESCRIPTION OF THE EXPERIENCE OF LEARNING FOR THE SAKE OF LEARNING IN ADULTHOOD

While the experience of learning for the sake of learning has facets that can be explicated individually, it is best understood as the whole in which it is lived. The Gestalt of this experience can best be understood through a metaphor. Learning for the sake of learning is like an afternoon stroll, rather than a commute from home to work. This can be seen in its non-linear, non-goal directed nature. As one co-researcher put it, "It's the journey rather than the getting to the destination" that is important.

The Horizon of the Experience

The four facets of the experience are the horizon of the experience, the experience itself, the paybacks of the experience, and the resolution of the experience. What would be constituted as the beginning of an experience is really the horizon of this experience because it does not occur only at the start, but remains in the background, advancing and receding at different times. The horizon has three aspects: the opportunity to learn, the interest to learn about, and a desire to learn.

1. The opportunity to learn is the combination of the availability of time and an interest in a subject. The learners either "find" that time is available for learning because something else has been completed or they rearrange their schedules to free time for learning.

2. The interest to learn about is often a curiosity that has developed from a previous learning project or has been an interest of long standing. They are intrigued by an interest and rather than say "so what" they pursue their questions until another interest pulls them away.

3. The desire to learn is expressed in three ways. The learners learn just for fun, as a natural outgrowth of their curiosity about specific things around them, and to satisfy an addiction to learning. One co-researcher summed it up by saying, that the learning experience is "compulsive the way that an addiction is compulsive." They must learn.

These three aspects, the opportunity, interest, and desire create in the learner a sensitivity to a learning opportunity. This sensitivity is similar to having a crush on someone who drives a yellow convertible. Prior to this a yellow convertible was rarely seen, but now they seem to pop up all over. Just as the cars don't really pop up "coincidentally" to the person with the crush there is no coincidence that the interesting course or article pops up to the learner. The "just happened" has its ground in the ongoing interest that the co-researcher had but never "had the opportunity for before." The serendipity is not coincidence but the final manifestation of a long submerged interest. This learning is not generated from the person outward, "I wonder what I can learn today," but comes from some topic that intrigues and pulls the learner.

The Learning Experience

If we understand the horizon as the initial decision to take a stroll, the second facet is the experience of the stroll itself. An explanation of the following four aspects will assist the reader in understanding the learning experience: (a) the learners' feelings, (b) the learning process, (c) the learners' interactions with others, and (d) how time is experienced.

(a) The learners' feelings are shaped by and help to shape the experience. They report that the experience is exhilarating, stimulating, and fascinating. It is in one co-researcher's words, "an intellectual orgasm." The orgasm comes not from having the knowledge, the new skill, or getting the grade. It is found in the process of the learning. The primary enjoyment comes from searching for information, not from amassing and retaining it. This searching is not viewed as Sisyphus viewed his surroundings - more hills to impede his progress with his rock, but as a mountain climber views his environment - more wonderful peaks to challenge.

(b) This learning process rarely proceeds in an organized, linear manner. The learners most often "follow the flow of it. Whatever comes up next is what I would do." This learning is not without its obstacles, but since the object is the stroll and not the destination a whole new meaning is given to encountering an obstacle. Difficulties are not viewed as potential failures and mistakes not viewed as shameful disappointments to be hidden, but both are seen as challenges to be worked though or material the learner is not yet ready to deal with which may be approached again after more background has been achieved. Risks, rather than being potential pits on the way to a predefined goal, become adrenaline raising parts of the experience. No matter how much the learners accomplish, the challenge always exists because there is always new territory to explore. One learner compared it to getting "a hole in one on the golf course or bowling a 300 game, you try to do that the next time and you realize that the challenge is still there."

The challenge in this learning experience is internally intentioned. As the challenge begins to decrease a new level of difficulty is sought by the learners. This challenge is an act of intentionality. They work to sustain it rather than work to reduce it. In regular learning the reduction of challenge is seen as satisfying while in learning for the sake of learning satisfaction is found in the maintenance of challenge.

(c) Other people, while not essential, can impact the learning experience in positive or negative ways. Fellow learners and empathic others are viewed as comrades in this learning experience. A stroll can be more fun when shared. Fellow strollers can show the learner a new flower or suggest a new path. They will listen to a new discovery being explained and share in the excitement new knowledge brings. The hinderers affect the strollers by wanting them to jog through the woods and turn the stroll into a commute from place A to place B in the shortest possible time. These individuals try to impose their learning needs on this learning experience and turn it from learning for the sake of learning to goal directed learning.

(d) Time is experienced differently in this experience. It flows out as the learners become immersed in their learning. Learners do not feel rushed. They become unaware of the passage of time. The significance of this comes in the analogy to the Gestalt notion of being here and now or present centered. As the learners are lost in the moment they are not worried about they future nor remember the past. They are learning here and now. This is an experience in which they give themselves totally to the situation.

The Paybacks of the Experience

The paybacks come from the pleasure the learner feels while engaged in learning and the better understanding of themselves and the world they gain from the experience. Instrumental effects, i.e. a job promotion or a new job, sometimes result from this learning experience, but this does not change the learning experience to instrumental learning, just as finding and eating wild strawberries does not change the metaphoric stroll into a food gathering venture.

The Resolution of the Experience

The resolution of this experience is different from other learning experiences since it seems to go on endlessly. This experience does not stop when goals are met because there are no finite goals. The stroll doesn't end at the days close because the purpose is to stroll, not to arrive somewhere. The experience is open-ended. It expands to encompass more questions as the learner learns. The learners structure the experience to provide temporary satiation but no real closure. This is an evolving experience and as it evolves it grows. There is rarely a confined mass of material to be learned. More often the learners are faced with an expanding universe of unknowns to seek out and explore. Each bit of new knowledge exposes more unknowns to the learners.

Thus the structure of learning for the sake of learning becomes a spiral rather than a straight line. The resolution, in its indefinite nature coupled with the rewards constitute the background for the next experience of learning for the sake of learning. Thus the process repeats itself.

Implications of the Experience

In essence, by learning for the sake of learning the individual has the opportunity to become a learner. What does it mean to become a learner? Wheelis makes a good analogy in the following description. "A young man who learns to drive a car thinks differently thereby, feels differently; when he meets a pretty girl who lives fifty miles away, the encounter carries implications he could not have felt as a bus rider. We may say, then, that he not only drives a car but has become a driver" (1973, p. 12). Then new situations offer possibilities to him that he would not have had before he was a driver. People who habitually learn for the sake of learning enjoy it and get into the spiral where the internal reward becomes a reason which, in turn, becomes part of the ground for the next experience. When this happens repetitively individuals may become learners. The significance of learning for the sake of learning, thus, is that upon repetition the individual becomes a learner. New situations hold forth the possibility of taking another stroll.

VALIDATION OF THE FUNDAMENTAL DESCRIPTION

This fundamental description was sent to each of the ten co-researchers for their validation. They were asked if their personal experience of learning for the sake of learning fit within this description. They all said that their own experience was included in this fundamental description. One wrote, "The metaphor of the stroller strolling is right on target and expresses the open-endedness of my pursuit better than I could have myself."

IMPLICATIONS FOR PRACTICE AND RESEARCH

This research has several important implications for adult educators. It has impact on both practice and research. This research has described a little studied orientation of learning, one in which there is no planned application. Most of the emphasis in educating adult educators has emphasized the goal-directed learner, while the learning-oriented learner has often been invisible and considered one of a small population.

Implications for Practice

Understanding this research will assist Adult Educators to think differently about adult learners. This information provides a broader perspective of the learning experiences of adults. An understanding of this experience will assist an adult educator to identify it within their learners and to assist them in continuing their learning, without forcing them into the goal- or activity-directed mold.

Adults learning for the sake of learning may use a learning facilitator differently. While they may enroll in a regular adult credit or non-credit class, they are equally likely to use the learning facilitator for a few directions or guidance as they move from one "track" of learning to another. Educators must be able and willing to supply this bit of information and then let them go off again, as a race volunteer hands a cup of water to a marathon runner without impeding the runner's progress or speed.

Ways to welcome these learners into classes need to be developed. They need to feel they are welcome to remain in the group while pursuing their own explorations. A confident teacher is needed not only to allow, but to encourage students to go off on their own.

Implications for Research

Numerous research possibilities can be developed from this study. Now that the experience has been described, further research may be conducted to identify individuals who use this learning orientation, to determine how much of their learning is in this orientation and how much in the goal or activity learning orientations, and to learn if certain topics are tied to certain orientations,

It is too early to determine if these learning experiences can be designed for an individual instead of by the individual or if learners can learn to develop this kind of experience for themselves with help from learning facilitators. Additional research will have to be completed before these issues can be answered.

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ADVANCES IN THE NEUROSCIENCES:
IMPLICATIONS AND RELEVANCE FOR LIFELONG LEARNING PROFESSIONALS

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Abstract

The various branches of the neurosciences are beginning to converge both in collaborative research as well as in joint conferences and professional meetings. Some efforts have likewise involved educators in dialogue with neuroscientists. Adult educators, however, have seemed absent from such strides, despite the realization of the importance of this territory by several pioneers in the field. The purpose of this inquiry was to review the research literature in the neurosciences focusing particularly on the phenomenon of neuroplasticity. Findings reveal a continuous adapability and growth of the brain neuronal structure which potentially adds an expanded basis and foundation to lifelong learning and particularly to adult education as a field of both study and practice. Keeping mindful of the caveats, the neurosciences offer a challenge to the field.

Within recent years the neurosciences (neuroanatomy, neurophysiology, neurochemistry, neurobiology (cellular and molecular), and neuropsychology have begun communicating with one another in the form of professional meetings, joint conferences, and collaborative research. This feat has lent for a more integrated understanding of the territory. Although molecular and cellular concerns and discussions have up until recently dominated the annual meetings of neuroscientists, this year, the seventeenth annual meeting of the Society for Neuroscience held during November, 1987, offered an agenda balanced with the "neurobiology of whole-animal learning and behavior" (Broad attack, 1987, p. 1651). Consequently, given these united advances, it seems time appropriate to examine these strides and their potential implications for lifelong learning professionals.

Interface between education and the neurosciences has been emerging as the focus of symposia and publications for about a decade now. Symposia for the most part, however, have been small-scale. A main aim has been to bring neuroscientists and educators together to ultimately advance research. Adult education and adult educators, however, to the writer's knowledge, have seemed missing from such strides, although prominent adult educators such as Roby Kidd and Cyril Houle have over the years stressed the important potential contribution of the neurosciences to adult education. Kidd (1973) had suggested that adult educators stay informed, while Houle continually adds the urging that one draw the neuroscientists into the adult education field.

PURPOSE, APPROACH, AND SCOPE OF THE INQUIRY

The purpose of the inquiry was to review the research literature in the neurosciences, its potential relevance for lifelong learning professionals, and to introduce the material to the field for dialogue and discussion. Synthesizing bodies of information and knowledge from other disciplines and introducing it to another field of inquiry constitutes a form of meta-research. This presentation and paper upon which it is based is preliminary and foundational in nature, a first step in a broader and deeper inquiry. The focus of the present incipient inquiry was upon the research relevant to the phenomenon of neuroplasticity, which underlies and undergirds claims of a growing, adapting neuronal structure during adulthood.

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Data sources included books, articles, conference proceedings, and annals of the international literature base written in the English language. Most of the literature reviewed was addressed to neuroscientists per se and dealt with original research. Original sources were examined to garner a structural and functional understanding of the research upon which knowledge claims are based. A further search was then pursued relevant to the interface between neuroscience and education. Only eleven such articles were retrieved, in addition to several books and conference proceedings. None was from the adult education literature. Material resources were complemented by discussions with neuroscientists. While such discussions were preliminary in nature, more in-depth interviews with leading neuroscientists are scheduled for February, 1988. Some should be completed by the presentation date for this conference.

FINDINGS AND DISCUSSION

A consistent theme permeating the literature of the neurosciences (and relevant to the thrust of this conference) is the continuous adaptability and growth of the brain's capacity. Barring disease or extreme disuse, life in the adult brain is neither static nor totally decremental in nature.

Methodologically speaking, data for knowledge claims in the literature reviewed have generally been derived from three and a more recently emerging fourth source:
a) Controlled experiments with animals such as snails, rats, cats, rabbits, and monkeys (including invasive experimental injury); b) Study of living brain-injured humans via accident, illness, disease on a large scale or case study basis sometimes in a comparative manner. Also, studies of how the brain recovers from injury have generated additional data; c) Autopsies of injured and normally functioning humans; and d) EEG and the more recent computer imaging technologies such as BEAM (Brain Electric Activity Mapping), a non-invasive approach which records, via computer imaging, moment-to-moment changes in brain activity which correspond with learning (Duffy, Burchfiel, & Lombroso, 1979; Duffy et al., 1980a, 1980b; Torello & Duffy, 1985); as well as other approaches such as CAT-scans, PET-scans, and NMR (Nuclear Magnetic Resonance).

Even a few decades or so ago the belief that the nervous system and neuronal capacity was wired and fixed during development and not amenable to change once adulthood was reached was as widespread as the belief that adulthood was a period of stability and the adage that "you can't teach an old dog new tricks." In fact, as of the 1950's the prevailing dogma was that changes in the adult brain stopped and the aging process brought about demise. This "doctrine of anatomical fixity" initially hampered researchers from even recognizing serendipitous experimental evidence that, for example, training led to growth of the cerebral cortex. Questions by medical practitioners and researchers about how people recovered after brain injury, however, led to research which revealed the plasticity (i.e. modifiability and regenerative capacity) of the neuronal structures. (Cotman, 1978; Bignami, et al., 1985; Neuroplasticity and Repair, 1983; Seil, Herbert, & Carlson, 1987). By the 1960's and 1970's, evidence suggested that dendritic growth as well as synaptogenesis appeared to continue even in more mature systems (Renner & Rosenzweig, 1987).

Scientists are still working on the why and how of such observations. Endogenous and exogenous environments appear to play a pivotal role. For example, findings that the structure of the peripheral nervous system regenerated more easily than that of the central nervous system (CNS) led to further experimentation suggesting that the individual potential for regeneration was inherent in the neuronal structure but did not express itself possibly due to the growth-limiting properties of the endogenous environment in the CNS (Black, 1985). An equally powerful finding and one most relevant to lifelong learning professionals is the role that exogenous environments seem to play. The environment is an important factor in determining whether regenerative potential will be expressed (Bloom, 1985).

Perhaps one of the most pertinent breakthroughs of the past decade is the "working" conclusion by neuroscientists (which is now driving much research) that axon-sprouting and synaptogenesis is not something restricted to repair and regeneration after injury, but may represent an inherent capacity of brain plasticity (Cotman, 1978; Marsan & Mathies, 1982; Reinis & Goldman, 1982). Moreover, increasingly compelling evidence is emerging relevant to the role that enriched environments play in the brain's continuous growth (Renner & Rosenzweig, 1987).

Many structures of the brain appear to be modified by enriching experiences (particularly exposure to a variety of experiences): for example, thickness of the hippocampus, increase in synaptic density, changes in neurochemistry(e.g. neurotransmitters, nucleic acid, protein, cholinergic system, etc.)--all of which affect both learning and memory. In other words, the brain appears to be a plastic organ responding to shaping and modifiability by interaction with the external culture or environment.

Synapses, of course, are those all-important links through which neurons process information and "talk to each other." Increasing evidence suggests that synapses play an important role in adult information storage and that experience may initiate synaptogenesis (Greenough, 1984). Such neural connections (i.e. the strength of synapses) seem to change likewise as a function of their own experience. As suggested by the research of Sinclair (1986), they are weakened by overuse and strengthened by rest after use. This assertion, as is evident, presents a potential challenge to the assumptions of many learning theories.

IMPLICATIONS FOR LIFELONG LEARNING

The findings of neuroplasticity even in the adult brain offer a potential neuroscientific basis to the idea of lifelong learning and to the potential viability of learning as a lifelong process. This expanded knowledge base broadens and enriches the field of study and has implications likewise for the field of practice.

Often we become our belief systems and theories and our expectations of self and others can be releasing or inhibiting. A strongly held belief, for example, in "anatomical fixity" of brain capacity which had become ingrained by the 1950's inhibited researchers from recognizing serendipitously generated experimental evidence which suggested the plasticity of the brain even in the adult years.

If, as the findings suggest, synaptogenesis and strengthening of existing synapses continues during adulthood this knowledge may help ameliorate doubts about one's learning ability with age. Just the knowledge itself could serve as a foundation for a more positive attitude and motivation in learning for both learner and lifelong learning professional.

More specifically, the suggestion of the research by Sinclair (1986) that synapses were strengthened by rest after use and weakened by overuse may be of import to a further understanding of information overload particularly in today's information society and suggest further pathways of collaborative research between neuroscientists and educators. Although the brain does appear to function better with more information, information overload and overuse of the capacity can raise havoc. At minimum, if valid, such findings could offer some food for thought for those involved in program planning, design, administration, and other areas. Perhaps learners themselves are aware when the synaptic "connections" are not being made and could use this information as a possible alert that they are in information overload or overuse of the brain's energy source just as one is aware when one is overtaxing the heart or the muscles. The attitude and awareness generated by such a stance could serve to alleviate both the frustration and ensuing anger, aggression or sometimes depression which sometimes besets the adult learners wanting to accomplish it all given a "time is running out" frame of mind.

In conclusion, although actual concrete educational implications may not be totally clear as yet, it behooves lifelong learning practitioners and researchers to stay informed and knowledgeable particularly with regard to the basic research upon which knowledge claims are based. In that way, one might prevent problems such as the runaway programs which have surfaced on brain lateralization (i.e., right brain/left brain) or brain growth spurts, sometimes based upon an insufficient understanding of the parameters and dimensions of the research claims.

Keeping mindful of the caveats, the growing literature base from the neurosciences provides a new way of thinking about lifelong learning and provides an expanded base for both research and practice. This modest discussion has hopefully provided an incipient step along the way and will encourage further dialogue, discussion, and action among lifelong learning professionals.

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NORMATIVE AND PREDICTIVE GENERALIZATIONS IN ADULT EDUCATION RESEARCH

Robert F. Carbone[1]

Abstract

Much of what professional adult educators do is guided by beliefs that are normative as opposed to predictive in nature. Such notions generally derive from some "authorative" source, usually a practitioner. Rarely are these generalizations based on careful controlled research that can order phenomenon or predict outcomes of behavior. This paper distinguishes between normative and predictive generalizations and suggests an approach to research that could yield a more substantial theoretical base for the practice of adult education.

Introduction

It would be unthinkable for any leader in government, business, or education to dispute the importance of adult education in America today. The continuing education of adults is regarded by most thoughtful people as a necessary prerequisite to progress in any complex and highly technological society. That so important a social institution rests on so frail a theoretical foundation is frightening, perhaps dangerous. In contrast to other social imperatives -- for example, national defense, health care, or energy resources -- the body of theory which undergirds adult education as a field is amazingly thin.

It can be said with some confidence that adult education has few, if any, principles or "laws" that guide professional practice; that is, generalizations that provide practitioners with the ability to predict outcomes of one or another course of action. Instead, professional practitioners in adult education rely, in large measure, on certain normative concepts that derive from experience or from values internalized by these practitioners.

At the risk of evoking negative reactions, it can be asserted that the practice of adult education, at its current state of development, is similar to that which was found in certain other technical vocations prior to the time when "scientific" disciplines evolved predictive generalizations to guide the work of practitioners.

Normative Generalizations

Adult education, not unlike other subfields in education and the so-called "soft" sciences, is driven primarily by sets of normative generalizations usually enunciated by some authority in the field. To be certain, the "authoritative" credentials of the provider of such generalizations are not trivial. Authorities in adult education have, as a rule, created and managed adult education programs, thought long and hard about their field of endeavor, and communicated their ideas widely through articles, books, and professional presentations. Few of them, however, have conducted extensive and carefully controlled research designed to test the efficaciousness of their generalizations.

Perhaps the most obvious example of a normative generalization in adult education is the notion that adults are "self-directed learners". Of all concepts in the field, this one is most widely accepted and most often repeated. It is fair to ask, however: How useful is this generalization? Teachers in ABE programs likely find it of less value than do instructors of continuing education seminars for cardiologists or nuclear engineers. Somewhere in between are those of us who teach advanced graduate students, many of whom are docile, passive, and unable

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to define their scholarly interests even though they are mature and experienced people. And, even in any homogeneous group, learners display varying degrees of ability to design and carry out their educational activities.

Given the differential applicability of the assertion that adults are self-directed learners, the obvious conclusion is that it has only limited predictive capabilities. Designing programs or selecting instructional techniques based on this concept may be at best a chancy endeavor.

Predictive Generalizations

There are generalizations, however, that in varying degrees help practitioners predict outcomes of specified behavior and order knowledge in basic as well as in applied fields. Such generalizations provide an estimate of the mathematical probability that conditions A and B will yield result C. The degree to which these results occur indicates how broad the generalizations are and how much confidence practitioners can place in them.

Generalizations in any field, of course, do not spring full-blown as if by magic. They evolve from trial and error activity into simple predictive ideas deduced by practitioners -- if you treat an animal skin with an acidic substance present in coal tar, the skin will be preserved and pliable; adding a certain fungus in the brewing process will increase alcoholic content; lowering carbon content in cast iron helps make it more malleable yet stronger.

These narrow predictive generalizations -- if you do this, the result will be this -- attracted the attention of a few inquisitive people who were interested in them as ideas, not as guides to practical application. As the result of repeated experimentation, usually in laboratories for "hard" sciences or in the field for "soft" sciences, these narrow generalizations were fashioned into broader "laws" that became the organizing elements of our modern academic disciplines. Another way of saying this is that research provides the means through which it is possible to increase the breadth of predictive generalizations that explain and organize knowledge about larger and larger realms of phenomena.

Research in Adult Education

As has been the case with scholars and practitioners in the broad field of "education", many adult educators have aspired to make our field more "scientific" and thus elevate it to equal standing with other applied professional fields. Clearly, progress in this direction has occurred. The increasing number and quality of journals and books about adult education give evidence of this progress.

Expansion of the literature on adult education notwithstanding, research in our field does not appear to have emulated the evolutionary process that occurred in the natural or even in the social and behavioral sciences. Generalizations about adult education remain relatively narrow and of limited predictive value. Behavior of adult education practitioners appears to have changed very little even as their professional libraries continue to expand. Why is this the case?

On one hand, many practitioners of adult education treat normative generalizations as if they were predictive. These chimeric imitations of substantive predictive theory, like desert mirages, have not led us to the cool oasis of high professional stature.

On the other hand, few researchers in adult education mount carefully conceived programs of research to increase the predictive quality of those few generalizations that do appear to explain and order the behavior of adults as learners or the activities of adult education practitioners. Until greater movement in this direction occurs, the practice of adult education will remain a somewhat random and idiosyncratic vocation.

A Plan of Action

To merely cry out that there is a problem in adult education may be helpful but it isn't sufficient. A proposal for corrective action is needed. What follows is one approach that has potential for advancing the field. It is comprehensive, expensive, and it would demand a level of cooperative effort not yet achieved in education.

An initial step is the creation of a national agenda for research on adult education. Through united efforts of all (not just the major) voluntary associations of adult educators in the nation -- possibly under the leadership of the Coalition of Adult Education Organizations -- such an agenda could be produced. It should include at most four or five crucial questions that researchers might address, questions like: What are the characteristics that differentiate self-directed learners from those who require varying degrees of structure and direction? What factors in family life, early schooling, and youth culture stimulate or impede the predisposition of an adult to continue learning? What are the basic cognitive processes, skills, and values inherent in the notion of "learning how to learn"?

Of course, these may not be the most crucial questions open to study. The point is that, in concert, the power structure of adult education in America must reach agreement on some manageable set of questions and resolve to create incentives that will cause researchers to design studies attacking those questions. Subsequent steps in the proposal for action are relatively predictable.

Resources to underwrite extensive research activity must be marshalled. Substantial federal and state funding, directed specifically at the crucial questions, must be appropriated. Dozens of the nation's major foundations must be encouraged to include these questions in their funding priorities. Corporate contributions committees must be made to recognize their self-interest in this endeavor and their responsibility for directing gifts accordingly. Universities and the national associations to which they belong must orient their policies and resources to the task and thus stop viewing adult education as merely a source of institutional revenue. Combined, all these resources should total several billion dollars. If sums of this magnitude materialize, researchers will create studies to attract them.

One final step completes the proposal. Results of studies relevant to the crucial questions must be reviewed, generalized, and disseminated. A national continuing seminar of world-class scholars would be charged with issuing concise, readable, and free statements outlining the substantial theoretical principles emerging from the accumulated research data. Dissemination through organizations that produced the original research agenda would be a natural means of infusing these generalizations into professional practice.

Achieving this or some alternative plan for advancing the theoretical base of adult education may sound like an impossible dream. So did conquering polio or putting a man on the moon. Cooperation of researchers, practitioners, government, foundations, and voluntary organizations created reality out of those dreams.

Our population is aging, new technology appears daily, the nature of work and the workplace changes rapidly, world population continues to grow, resources diminish accordingly, human and international relations show few signs of increased harmony. These are elements of ferment that can produce a national commitment to advancing adult education as a professional field.

If a commitment is to be made, today's adult education practitioners, their leaders, and their professional associations must insure that it expands and reinforces the field's theoretical foundation rather than merely increase opportunities for adults to learn. The goal is more rationale practice, not more random activity.

RESEARCH DOES NOT START WITH THE PROBLEM: BEGINNING RESEARCHERS' PERSPECTIVES AND APPROACHES TO THE PLANNING PHASE OF RESEARCH

Jennifer Knowles
Ronald Jimmerson

Abstract

This paper identifies and describes factors important to beginning researchers in the planning phase of research, in the Adult and Continuing Education program at Washington State University. The Myers-Briggs Type Indicator (MBTI) was used to attempt to describe students' perspectives and approaches on the pre-problem phase of research. Implications of this study for dealing with preferred styles of inquiry are suggested for graduate student research advisors and instructors of research methods.

STATEMENT OF THE PROBLEM

The problem addressed in this study was that little information is available to help graduate student research advisors and instructors of research methods understand how beginning researchers approach their first major research effort. The purpose of this exploratory study was to better understand beginning researchers' perspectives of the pre-problem identification phase of research. This phase is defined as all activities, events and tasks to be completed before developing the research proposal.

Understanding this phase involves analyzing how internal factors such as personal understandings, interests, emotions, goals and preferences affect the beginning researcher's approach to research. Predictable external factors such as time, money, and expertise needed as well as political factors such as expectations of the program and advisor, and implications for future employment, also affect the planning of research. Together, these factors form a framework for what is researched and how the research is carried out by the student. The Myers-Briggs Type Indicator (MBTI) is one tool which helps us to better understand these internal factors and their relationship to external factors in the planning phase of research. The MBTI documents preferences which structure the individual's personality and helps point out the similarities and differences in the way beginning researchers perceive the research project and make judgments based on their perceptions.

METHODOLOGY

The study was based on the naturalistic paradigm for research characterized by its concern with human behavior and its emphasis on natural settings. An in-depth analysis of beginning researchers enrolled in the Spring 1986 Master of Adult and Continuing Education program's research methods class was conducted during the

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pre-problem phase of their research. Data were collected with the group starting at the beginning of their formal coursework, and continuing through completion of the research methods class. Data were collected through formal (ethnographic), and informal interviews, observations and document analysis. Persistent observation of the sites, triangulation of methods, and member checks of the research design and results, ensured trustworthiness of the study. An audit trail maintained by the researcher was inspected by an external auditor to assess the trustworthiness of the research processes. Participant perspectives and approaches to research during the planning phase were identified and described based on the Myers-Briggs Type Indicator.

DESCRIPTION OF DATA

The objectives of the study were:

1. To identify and describe factors important to beginning researchers in the pre-problem phase of research.

2. To describe students' perspectives on the pre-problem phase determined by the Myers-Briggs Type Indicator.

This study identified and described a wide range of students' perspectives on the pre-problem phase of research. Using quotes from the respondents, data were analyzed and summarized. As a whole, the information was organized into three categories suggested by the literature and confirmed as important by this study. These categories included: 1. structure of the masters program, 2. the advisor and committee and 3. personal growth and development. Data from the MBTI were used to help illustrate how students perceived and made decisions on their research. In addition, two other categories were studied: (1) "Approaches to Inquiry"-describes how the MBTI helped type and describe approaches to research and (5) "Realities"-includes the practical, useful "hints from students" regarding completion of this phase of research.

Structure of the Masters Program

The structure of the ACE program provides a set of procedures for completing coursework and the thesis. Also included in this category is the "paradigm" development of the field. The paradigm includes the beliefs, values or methods adhered to by the program and instilled into the completion of tasks by the student.

The respondents expressed varied concerns related to the structure of the program and research class regarding their early stages of research. These included: 1) flexibility of class requirements, 2) lack of time to learn about methods and to complete the proposal, 3) coping with ambiguous concepts, 4) understanding and developing an identity with the field and program of adult education, 5) sequences of classes in relation to research methods, and 6) understanding specific tasks of research. Some sources of stress during this time were a lack of time to devote to the project, information overload, self-doubt, discouragement due to the writing process, feeling a lack of direction and lack of congruence between the research methods class and committee's expectations.

The Advisor and Committee

This study confirmed the potential importance of the major advisor and committee on the pre-problem phase of research. Formation of the committee, how it operates and questions on roles were frequently brought up. In general, the process of selecting the advisor and research committee was seen as a stressful, complex and the advisor and committee selection process.

Sources of stress during this process included: 1. changing the advisor if the assigned advisor is "not working out", 2. putting together the "right" committee, and 3. Lack of agreement on roles of committee, advisor and student.

Personal Growth and Development

This section includes concerns from respondents that reflect changes in attitudes about the research process, themselves and their identity with the field or program. It includes the results of interview questions related to: (1) changes in attitudes, (2) describing experiences as a graduate student and (3) changes as a result of being a graduate student.

Mentioned most often was the change in the students' perception of what was involved with research--its procedures, goals and time necessary to do the project. In general, the pre-problem phase of research is characterized by respondents as a critical time of personal growth and development. Experiences leading to growth began before the program but were clarified for most by completing coursework in the ACE program and through developing a proposal. Types of growth and change were most evident in the following areas: 1. self-esteem, 2. clarifying one's goals for graduate education and research, 3. changes in attitude about research, 4. development of skills pertaining to research and 5. developing strategies for dealing with personality traits and learning.

Approaches to Research

This section describes research approaches used by the respondents of this study. The Myers-Briggs Type Indicator was used to help describe different preferences regarding research by describing what factors are important to each type, and processes used for topic selection. The MBTI gives us clues about (1) how persons prefer to deal with information through two opposite ways of perception, sensing or intuition, and (2) how they prefer to make decisions based on their perceptions, through thinking or feeling. These two preferences refer directly to perception and decision making. The combination of these two preferences yields four personality types which can be used to generalize about the link between psychological type and preferred styles of inquiry. Table 1 provides a summary of respondents' psychological type in relation to their preferred approach to inquiry.

Realities

This section includes concerns from respondents concerned with helping others "survive the thesis process". Many of the concerns reflect the informal procedures, and advice that is not found in the typical research textbook. Concerns are listed below and include: 1. Respondents felt they needed more preparation in their subject matter and in research skills. Perhaps the most popular piece of advice was to make sure there was adequate time to have started searching for topics, and also have started the literature review before enrolling in the research methods class.

2. Time pressure is prevalent when students haven't finished coursework and have outside pressures such as having to work at the same time.

3. Frustrations were apparent with adopting the concept of becoming a self-directed learner through the ACE program and were especially evident through the research methods class. In this category, students are reflecting back to when they started the program and are advising others to make sure to have time to explore the field and have goals, career or otherwise, in mind when they start the program.

4. Respondents mentioned that networking, finding a support group and utilizing peers for help in research methods is recommended and important in motivation during

5. Learning about alternative research methodology such as "naturalistic inquiry"

Table 1. Summary of Respondent's Psychological Type

Sensing-Thinking (ST) - (3)	"Analytic Scientist"
Characteristics	Depth of concentration, reliance on facts, and use of logic and analysis
Topic selection process	Blended undergraduate discipline with principles of adult education
Preferred approach to inquiry	Desired to organize and narrow down ideas Thinking dwelled on developing timelines, and product vs. research processes Theory testing and building; consensus and certainty
Intuitive-Thinking (NT) - 3	"Conceptual Theorist"
Characteristics	Grasp of possibilities, logic and analysis
Topic selection process	Preferred to select own topic Experienced lack of identity with the program and field of adult education
Preferred approach to inquiry	Preference for working alone and being in charge of their situation. Preferred using cause/effect, correlations, and problem analysis type methods Preferred applied problems
Intuitive-Feeling (NF) - 2	"Conceptual Humanist"
Characteristics	Grasp of possibilities, warmth and sympathy, deliberate and conscientious, reflective, concerned with future
Topic selection processes	Topic selected after internalized field and role of adult education Dominated by concern for others and doing what was most needed
Preferred approach to inquiry	Methodology selected after topic To involve people; behavioral and interpersonal. To serve humanity and seen as an emotional affair.
Sensing-Feeling (SF) - 3	"Particular Humanist"
Characteristics	Rely on facts, warmth and sympathy
Topic selection process	Need to help others Emphasis on personal interest, ethics, finances and career application Described as frustrating and causing personal changes
Preferred approach to inquiry	Case studies (to capture and describe the uniqueness of the individual), but in a factual way Participation, observation and action science methods preferred Frustrated with ambiguous situations

*Mitroff (1978)

guidelines in its conduct.
6. Trying to balance one's personal life with graduate school was a concern that emerged from the data.

SUMMARY

A variety of factors are important to the beginning researcher during the pre-problem phase of research. In general, these factors fit into the broad areas of social, psychological and pragmatic factors. More specifically, the factors fit into the categories of program structure, selection of the advisor and committee, and personal growth and development of the researcher.

Additionally, respondents were "typed" based on the Myers-Briggs Type Indicator which helped to characterize different approaches to research. This study found students in all four personality types. There were slightly more who preferred Sensing-Thinking styles over Intuitive-Thinking styles. Only one was found in the Intuition-Feeling type.

The intuitive types were fewer in number and mentioned the "processes" and "meaning" of attempting research more often. "Meaningful research", "useful for others" and "finding relationships between diverse topics" were some other descriptors used. The backgrounds of the intuitive types were predominately from the social science fields.

"Realities of beginning research" included concerns from students wanting to help others "survive" the thesis process."

Understanding the perspectives of beginning researchers and how they approach their first major research effort in adult education is of benefit to three major areas. These include: 1. the field of adult education including masters programs of adult education 2. instructors of research methods and academic advisors, and 3. students of research methods.

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INTEGRATING ANDRAGOGY WITH CURRENT RESEARCH ON TEACHING EFFECTIVENESS

Billy E. Ross[1]

The theoretical basis for andragogy and its implications for facilitators of adult learning appears to have been based largely on our social concepts of maturation and upon the principles posited by perseptual psychology. Little empirically-based research has been generated to either support the primary tenets of andragogy. This paper addresses this issue and relates an emerging definition and rajogh to current research on teaching effectiveness. Key findings in current research in the writers opinion support the practices commonly associated with Andragogy.

Introduction

The process of maturation has caused some theorists to hypothesize significant differences between children and adults. Research, primarily in the area of Physiology, has confirmed many of these differences. In the areas of teaching and learning, however, few differences have been confirmed.

The introduction of the theory of Andragogy by Knowles (1970) and the four basic assumptions he presented as the foundation stones of this theory, has initiated an ongoing battle between those who advocate this theory and the adult education theorists who find little or no empirically - based reasons for supporting its claims. Some adult educators, in fact, have suggested dropping the term andragogy from the literature in adult education. Davensport (1987, p.19), for example, states "The author of this article certainly believes that adult educators could survive quite nicely without andragogy."

ANDRAGOGY VERSUS PEDAGOGY

Andragogy in the opinion of this writer, rather than an empirically - based theory of adult learning, is an example of visionary theorizing combining various assertions, concepts, and aims that reflect the conventional wisdom (shared feelings, beliefs, goals, etc.) of our society toward the degree of maturity commonly associated with adulthood. Through the process of socialization the basic assumptions about the adult learner posited by Knowles (1970) are instilled by the home, school, church and similar forces. The lessons taught by these forces are that as individuals grow and develop they are expected to become (1.) more self directing, (2) more experienced and resourceful, and (3.) more concerned about acquiring those skills, attitudes, and understandings required for maintaining and enhancing their occupational status.

Experienced facilitators of adult learning become less and less concerned with theory as they strive to create meaningful learning experiences for their clients. The distinctions between Andragogy and pedagogy become blurred as they hypothesize ways and means for assisting their students to achieve both common and individual learning objectives. Thus the solution to the andragogy - pedagogy debate advanced by Davenport (1987, p.19) in which pedagogy is defined as the "art and science of teaching and facilitating the learning of

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children," and andragogy is defined as the "art and science of teaching and facilitating the learning of adults," is worthy of acceptance since, as Davenport (1987) points out, "such definitions would be consistent with the beliefs and research results of many authors who claim that selection of learning approaches has little to do with other variables such as learning style, type of content, goals of instruction-learning, and even gender (Davenport and Davenport)".

FACILITATORS OF LEARNING

In the 1979 yearbook of the Association for Supervision and Curriculum Development (Norman V. Overly, Chairperson and Editor), Mitchell reminds us that "the learner, whether child or adult, must work in an atmosphere in which there is safety both physically and psychologically, an environment in which a sense of self-esteem, achievement, economic security, and sharing of mutual respect exists." These factors plus those cited above constitute a large portion of what is known about learning that is generalizable to all learners and learning situations.

In addition to factors related to the climate within the learning environment, other preinstructional decisions that must be made by the facilitator of learning were identified by Berliner (1984) as "content decisions, time alloation decisions, pacing decisions, grouping decisions and decisions about activity structures." Each of these decisions, according to Berlinger (1984) "... is known to affect the attitudes, behaviors, and achievements of students".

The facilitator of learning for either children or adults must demonstrate many personal characteristics known to enhance the effectiveness of the learning situation. One of the most comprehensive listing of these characteristics was compiled by the Teacher Education Conference Board of New York (Lightfoot, 1983). These characteristics do much to obscure the differences between pedagogy and andragogy.

1. Diligence in keeping oneself current and increasing one's mastery with respect to the body of knowledge and skill taught;
2. Commitment to continual personal growth through intellectual activity;
3. Awareness of societal expectations, institutional goals, and professional responsibilities;
4. Receptivity to advances in pedagogical practices;
5. Conscientiousness and proficiency in planning and preparation for teaching encounters, based on knowledge of the outcomes to be sought and the most efficient means of achieving them;
6. Artistry in managing and performing instructional functions effectively;
7. Concern for students as individuals, based on mutual respect;
8. Dependability as participant in faculty planning and decision making;
9. Dedication to furthering the effectiveness of the teaching profession;
10. Generosity in contributing talents to community welfare and improvement.

EFFECTIVE TEACHING RESEARCH

Since roughly 1970 an ever expanding group of researchers have attempted to plan, develop, and implement a comprehensive program of research into many of the questions relative to effective teaching. In addition to initiating studies into seldom investigated areas of the teaching-learning process, these researchers have attempted to evaluate and summarize past research findings in order to construct promising hypotheses as guides to new research efforts, Rosenshine (1976) in a discussion of what is known about teacher behaviors and student achievements, indicates the limits of our current knowledge-base by stating:

> "Although recent studies represent methodological and conceptual expansion of previous work, research on observed teaching behavior is new, sparse, and not always consistent in results. What we have learned to date is offered more as hypotheses for future study than as validated variables for the training and evaluation of teachers. Although practitioners can easily amass a large number of questions on teaching methods for which they would like clear answers, at the rate we are going it will be years before many of these questions are even studied."

The hypotheses developed by Rosenshine and Furst (Rosenshine 1976) from their study of past research suggest eleven teaching variables related to student achievement. Few, if indeed any advocates of andragogy would disagree with these variables as sound guides to classroom practice. The hypotheses suggested by Rosenshine and Furst are:

1. Clarity (7) - The cognitive clarity of the teacher's presentation.
2. Variability (8) - The teacher's use of variety during the lesson such as using different instructional materials, tests, or varying the level of cognitive discourse.
3. Enthusiasm (6) - Degree of stimulation, originality, or vigor presented by the teacher in the classroom.
4. Task-oriented Behavior (7) - Degree to which the teacher is businesslike or achievement-oriented in presentation.
5. Student Opportunity to Learn Criterion Materials (4) - Relationship between the material covered in class and the criterion pupil performance. Rosenshine and Furst also identified six variables of secondary importance that suggest significant teacher behaviors in instruction.
6. Use of Student Ideas and General Indirectness (8) - Acknowledging, modifying, applying, comparing, and summarizing student statements.
7. Criticism (17) - A strong negative relationship between teacher criticism and student achievement. Criticism includes hostility, strong disapproval, or need to justify authority.
8. Use of Structuring Comments (Advanced Organizers) (4) - Teacher provides "cognitive scaffolding" for completed or planned lesson.
9. Types of Questions Asked (7) - Questions categorized into low cognitive and high cognitive. Questions appropriate to task and group.
10. Probing (3) - Teacher responses that encourage the student to elaborate on his or her question.
11. Level of Difficulty of Instruction (4) - Student perception of the level of difficulty.

Two of the most massive studies of the variables thought to enhance student learning and describe effective teaching are the Texas Teacher Effectiveness Project and the California Beginning Teacher Evaluation Study. The Texas study was conducted by Brophy and Evertson (Brophy 1977) concluded that teaching is a complex combination of many behaviors that facilitators of learning must master. In the final analysis, however, the researchers concluded that "there are no magical "keys" to successful teaching". Berliner (1976) was one of the key researchers in the California study. A major conclusion reached in the study was that "performance which correlates significantly with outcomes were different by subject matter and by grade levels" (MacDonald 1975).

Sherman, et al. (1987) in a discussion of what makes for good teaching, found five characteristics that have "consistently" been attributed to excellent instruction. These factors, are (1) enthusiasm, (2) clarity, (3) preparation/organization, (4) ability to stimulate, (5) knowledge (both content competence and love of subject matter).

Other researchers and theorists, especially, Hunter and Bloom, have emphasize an apprentice-type approach to teaching in which the learner is prepared for the new learning through cues or introductory statements, is assisted in establishing the learning objectives, is provided opportunities to participate or demonstrate the attachment of the objectives and is provided with feedback as the learner attempts to master the learning objectives.

HUMANISTIC TEACHING

In his discussion of the processes of teaching and learning in adult education (andragogy) Knowles was influenced by the works of perceptual psychologists such as Roger, Combs, Maslow, and Kelley. Belief that the individual is the source of personal purpose, motivation, direction, etc., enables one to posit a teaching-learning environment in which these factors are dominant in the work of the facilitator of the learning experience. Today another group of perceptual psychology advocates are impacting the dialogue on effective teaching. The two are Glasser (1986) and Purkey (1984). These writers stress the extreme importance of the interaction between the learner and the adult who seeks to facilitate the learning. This interaction must strive to increase the learners feelings of worth, dignity, capability, and belongingness. In addition, the learner must be empowered to take change of his/her own learning to an ever greater extent in the classroom. Students, in the opinion of Glasser and Purkey, must be invited and empowered if the process of learning is to be meaningful to them. Duke (1987) synthesized the work of Purkey and Novak in the area of motivational teaching as follows:

1. Developing Trust - Eliminates surprises, follow through on agreements, watch body language, and share feelings honestly.
2. Reaching Each Student - Avoid random patterns of interaction with students, set aside time to listen to individual students, encourage students to write messages to the teacher, and know something positive to say about each student.
3. Reading Situations - Attend carefully to what students say, and look beyond students' overt behavior.
4. Making Invitations Attractive - Don't say one thing while meaning another, don't rust students to respond, and make praise realistic.
5. Ensuring Delivery - Communicate invitations clearly, follow up to make sure students "receive" an invitation.
6. Negotiating - Inquire about rejected invitations, and generate alternative courses of action.
7. Handling Rejection - Don't take rejection personally.

While the theorists dedicated to empirically-based evidence may find problems with the approaches advocated by Glasser and Purkey, the fact remains that no research known to this writer refutes the basic tenets of teaching and learning advocated by the humanistic theories of Glasser or Purkey. The current research findings on teaching effectiveness must be treated in a very cautious manner. Most findings appear to be effective with certain types of learners, but are not universal prescriptions. In essence, the review of current research into the area of effective teaching appears to state that"...no single teacher behavior or set of behaviors will universally promote student achievement gains in all subjects" (Wiles and Bondi, 1986).

Conclusion

To leave this discussion of the integration of andragogy and current research into effective teaching in a negative posture would be a mistake. Many research findings have tended to lend credibility to the conventional wisdom commonly associated with andragogical principles. Enthusiasm, task-oriented behavior, cognitive scaffolding, feedback, expectations, empowerment, and invitational teaching are variables that are being considered as research hypotheses to further our knowledge of effective teaching. Adult educators are encouraged to get "up to speed" in terms of current research findings while continuing to embrace the humanistic principles inherent in the theory of andragogy.

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ADULT EDUCATION VS. EDUCATION OF ADULTS: PERSPECTIVES ON A CONTINUING CONTROVERSY

Harold W. Stubblefield[1]

Abstract

The evolution of a normative theory of practice is traced from the origin in distinctions between adult education and education of adults and the emergence of principles of practice generalizable to all practice settings.

Practitioners in continuing professional education, human resource development, cooperative extension service, adult literacy, health care systems, community college and university continuing education, and other practice settings are guided more by the purposes of the institutions they serve than by a coherent philosophy. These practitioners are concerned about many kinds of education, particularly about providing educational opportunities through institutional settings. Many observers bemoan the absence of a comprehensive philosophy that is acceptable to, and accepted by, practitioners. The question they raise is this: Is there a philosophy--a set of principles--that transcends specific practice settings and can provide a guide for practice in these diverse practice settings?

In 1986 the American Association for Adult and Continuing Education recognized an important contribution to this recurring question in giving its annual awards for significant contributions to adult education research and literature to Stephen Brookfield for Understanding and Facilitating Adult Learning. Brookfield developed a philosophy of practice, operationalized in six principles, which he used to critique practice settings. Practitioners, he argued, usually accepted the institutional mission statement as their philosophy and judged effectiveness by what worked. Brookfield wanted more. He wanted a normative theory of adult education to guide practice.

Brookfield's Understanding and Facilitating Adult Education is the kind of informed, critical, and serious scholarship that the field of adult education in the United States sorely needs. By using critical theory in formulating a philosophy of practice, Brookfield broke new ground. It does not distract from his achievement to note that he treated this issue nonhistorically and worked within a larger tradition.

Some adult educators--including Brookfield--have worked within a tradition that regards adult education as a particular kind of education. Their theoretical work has been largely ignored, misunderstood, or misapplied. Nevertheless, they sought to articulate a philosophy of adult education that transcended the guidelines that emerged from the various practice settings. This paper assesses the claims of three generations of adult educators who thought of adult education as a particular kind of education for adults.

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THE CREATORS OF A TRADITION

The work of the first generation of adult educators who developed a normative theory of practice in adult education spanned several decades, beginning in the 1920s and culminating in the late 1940s. Of these Eduard C. Lindeman is by far the best known to contemporary adult educators. That recognition results from his now classic book, The Meaning of Adult Education (1926), a book that continues to inspire and mystify adult educators. Lindeman defined (or perhaps described would be more accurate) adult education narrowly and in a way that is unacceptable to educators and trainers serving institutional purposes. He placed specific boundaries around adult education. He began with the presupposition that education was life and not just preparation for life. Given that presupposition, Lindeman then restricted adult education to the consideration of non-vocational ideals that focused on the situation of the adult and used the adult's experience as the primary resource in the learning.

Lindeman conceived of adult education as unique kind of educational experience in which adults worked in a group context to examine their life situation and decide how to live more intelligently. Behind this interpretation lay Lindeman's study of the Danish Folk High School, his commitment to John Dewey's progressive philosophy, and his use of the applied social sciences in community organization and functional groups. This interpretation also reflected the "new" education he believed necessary to equip adults to live in a society that had become interdependent to such an extent that persons had influence only through groups and had become dependent upon experts, professional social scientists, for guidance. On some occasions, Lindeman called his kind of education adult education and he designated other kinds as education of adults. Included in the education of adults were liberal education, women's clubs, vocational and continuing professional education, and others. Lindeman did not denigrate the education of adults, but he did believe that only adult education, as he defined it, could help adults address their situation.

Harry A. Overstreet's The Mature Mind (1949), a Book-of-the-Month Club selection and best seller, was the culmination of a quarter of a century search for a determinative concept from the social sciences to guide adult education practice. That concept was maturity, a process of growing in specific directions. Overstreet used that concept to assess the extent to which institutions of society promoted maturity or immaturity. For him, the kind of education that adults needed should take place in a group context. It would engage adults in a study of the social sciences and humanities and that study would be the basis for the adults to examine their upbringing and the influence of institutions on their lives. Like Lindeman, Overstreet believed that the end of adult education should be mature behavior and there was a particular kind of education that would produce such an outcome.

Alexander Meiklejohn and John Walker Powell (1949) worked within a broad-based view of liberal education. American society provided many kinds of education for adults based on functional roles and status in society, but there was not an education that treated the adult as a whole. Their group study of books was the answer. In these groups, adults encountered ideas about human and social problems and had their own private and irrational views challenged by these thinkers and group members. Every adult needed this kind of education. In collaboration with Kenneth Benne, Powell (1960) later identified the consensus of the major philosophical camps in America: the developmental represented by community development and human relations/group dynamics and the rational, known as liberal education. All three believed that education occurred in a group context in which members were challenged by others.

ANDRAGOGY: A NAME FOR THE TRADITION

In the 1950s and 1960s Paul Bergevin at Indiana University built a normative theory of practice. Bergevin's (1967) A Philosophy for Adult Education was the culmination of twenty years of work to formulate a philosophy of practice derived in large part from Lindeman and Overstreet, repeatedly tested in community development and institutional programming. In this book, Bergevin defines adult education as (a) systematically organized programs of learning, (b) random, experiential learning, and (c) a field of study. Systematically organized programs of learning included the school type, independent study type, and the participation training type. Bergevin, with John McKinley, developed Participation Training as a training design to equip adults to work collaboratively in groups so that they could assume responsibility for their learning. Bergevin regarded Participation Training as a laboratory for learning the skills and attitudes of democracy. In their field work, the first activity was to conduct a Participation Training Institute so that community or institutional members had personal competencies in teamwork discussion and programming skills.

Out of their field work with churches, libraries, hospitals, and community organizations, Bergevin, McKinley, Robert Smith and others formulated a set of normative educational conditions and procedures intended to realize specific outcomes and to be used to evaluate institutional programs. From this program of action research (informed by a philosophical position) came the principles of practice that Bergevin presents in A Philosophy for Adult Education and in other books written with his colleagues. Bergevin's intellectual sources were Lindeman, Overstreet, N. F. S. Grundtvig, the early Carl Rogers as translated by Nathaniel Cantor, and the group dynamics literature.

In at least the past two decades the best known adult educator has been Malcolm Knowles, and the book that has made his reputation among practitioners in almost every practice setting is The Modern Practice of Adult Education (1970). Lindeman was Knowles' mentor in adult education, and his early work owes much to Overstreet's work on maturity. While Knowles acknowledges his indebtedness to Lindeman and Overstreet in The Modern Practice of Adult Education, it is clear that Knowles was working on another agenda. Knowles addressed the technology of adult education based on assumptions about adults as learners. He was not concerned as Lindeman with the meaning of adult education.

It is important to set Knowles' thesis about andragogy and pedagogy in perspective because among many professors and practitioners an almost worshipful and certainly uncritical attitude exists. In fact, a minor academic industry has formed around efforts to interpret what Knowles really intended in his use of the term andragogy. More has been made of this than I believe Knowles intended.

The book itself is a procedural book addressed to institutional program directors and teachers. Using four assumptions about adults as learners, Knowles draws implications for technology in the direction of greater involvement of the learner in the various elements of the programming and teaching-learning process. His sociology holds that the rapid production of knowledge requires that adults be able to manage their own learning and not have to depend on someone else to mediate between them and the sources of knowledge. In effect, Knowles has built a normative theory of practice based on the characteristics of adults as learners.

REVISING THE TRADITION:
BEYOND ANDRAGOGY AS TECHNOLOGY

Since the 1970 edition of The Modern Practice of Adult Education, Knowles has modified his ideas and has published in two books case studies of the andragogical process and self-directed learning. He has not, however, addressed the substantive issues raised about andragogy. The new work on a normative theory of practice builds on a chastened view of andragogy and the incorporation of critical theory. Jack Mezirow and Stephen Brookfield of Columbia University are the principal architects of this approach.

Mezirow builds his critical theory of adult education and learning on the critical theory of Jurgen Habermas, the idea of perspective transformation identified first in a national study of community college re-entry programs for women, and principles of andragogy. He translates Habermas's three generic areas in which human interests generate knowledge into three domains of adult learning. Each of these generic areas has their own interpretive categories, ways of determining knowledge claims, and methods of research. Each of these areas as learning domains has its own learning goals, learning needs, and educational intervention modes. It is the third domain, the emancipatory, that is the unique domain of adult education. Learning directed toward emancipation examines the cultural assumptions about roles that have been inculcated into persons by society.

The adult educator can and does carry out his/her programmatic functions within each of these three domains, but the work at the two lower levels is informed by the third, by critical theory. The principles of practice that incorporate the values of this third level are derived from andragogy but with an addition. The educator promotes greater self-direction, including the mastery of the technology of learning, and understanding of assumptions of about educational needs and goals. That is, adults have to examine ideology- their beliefs about power--and the extent to which they can act with freedom to order their own lives.

Mezirow's formulations to date have been largely theoretical, but Brookfield (1986), influenced considerably by Mezirow, has identified six principles of effective practice: (a) voluntary participation, (b) mutual respect,(c) collaborative spirit, (d) action and reflection, (e) critical reflection, and (f) self-direction. Drawing upon work by Argyris and Schon, Brookfield then examines the differences between these principles as espoused theories and the theories-in-use. Brookfield sees the facilitation process as a transactional dialogue in which the educator or trainer is not passive but active in working with the learner at all stages of the programming and teaching-learning process. The educator is not obliged to take at face value the learner's diagnosis of his/her need for learning and prescription of goals. The educator probes for the assumptions that underly this diagnosis and seeks to make this evident to the learner.

CONCLUSION

In the evolution of principles of practice, two stages are evident. In the first stage, several theorists such as Lindeman, Overstreet, Meiklejohn and Powell, and Bergevin worked within a framework of adult education as a unique form of learning, the principles of which could be applied to other learning situations. In the second stage, Malcolm Knowles changed the argument, focusing not on the differences between adult education and the education of adults, but on the differences between adult education in general and schooling for children. He develop a set of principles of practice based on the characteristics of adults as learners. In the contemporary generation, Mezirow has said, in effect, that there are principles of practice appropriate for each of the three domains of learning, but the principles of practice governing the third domain are inclusive of, and normative guides for, the other two. Brookfield has carried the application of critical theory further by incorporating critical theory into a set of principles (a normative theory of practice) applicable to practice settings in general.

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LEARNING OPPORTUNITIES FOR VOLUNTEERS: THE RELATIONSHIP OF LEARNING STYLES TO PARTICIPATION

Phyllis Castens Wiederhoeft(1)

Abstract

Participation in continuing education for volunteers concerns administrators and educators of volunteers. Adults tend to self-select learning situations which enhance their learning style (Brundage & MacKeracher, 1980). Do certain learning styles lead to decisions to participate in learning opportunities? Adult volunteers' learning styles were assessed using Grasha-Reichmann's Learning Style Survey. Categorization of participation occurred based on participation in a course sequence. Interviews determined the relationship of preferred learning style to the decision to participate. Preliminary findings suggest that negative learning experiences form perceptions about subsequent courses and decisions are influenced by learning preferences.

LEARNING STYLES AND PARTICIPATION RESEARCH

Introduction

Education for Volunteers can help provide the growth and development of volunteers (Naylor, 1976). Even so, practitioners can anticipate that some volunteers will not make much effort to attend learning courses. Other volunteers may attend a course, but soon after "drop-out" of the course sequence. Still others may complete the course sequence and give highly satisfied evaluations to the leader and/or agency.

What contributes to this variance in attendance? Studies of participation in the field of adult education have examined demographic characteristics (Cross, 1979; Johnstone & Rivera, 1965) and motivational orientations (Boshier, 1971; Burgess, 1971; Cross, 1979; Johnstone & Rivera, 1965; Morstain & Smart, 1974; Tough, 1971). These studies recognize the diverse demographics and motivations of learners, but often overlook individual learning preferences.

Learning styles are another aspect of the characteristics of learners. With the diversity of people volunteering, there also will be a diversity of learners in courses. Volunteers, may not participate in the course because of a perceived mismatch of learning style with teachign style. They may not voice concern with the educator that much a mismatch is occurring, but simply choose not to attend the courses.

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Brundage & MacKeracher (1980:47) describe a characteristic of adult learners:

> "Adults tend to self-select learning situations and teaching-learning relationships which enhance their own learning style. They appear to be very proficient at knowing intuitively which teachers and which learning situations are not for them."

If this statement is indeed true, it may help explain why adults participate in learning activities. How do adults self-select the appropriate learning situation? Do certain learning styles lead to decisions to participate in courses for volunteers while other styles lead to decisions not to participate? Do they want to enhance their dominant learning style? Will they attend courses though they are unsure of the match with their learning preferences?

Methodology

I am conducting a study with the Black Hawk Council of the Girl Scouts of America, Inc. in Wisconsin to answer these questions. I selected the Girl Scouts organization because I wanted a volunteer agency which provides a variety of learning courses and for which attendance is not mandatory. As an organization, the Girl Scouts are structured similarily to other volunteer agencies. Other agencies may not offer as many, or as varied, courses as the Girl Scouts, but I believe that the findings from this study can be adapted and applied to volunteers in many instances.

I used a revised form of the Grasha-Reichmann Learning Style Survey (GRLSS) to assess the learning styles of 346 adult volunteers in the Black Hawk Council. 258 respondents returned the survey for a 75% return rate. The GRLSS consists of 36 items to which a person responds on a scale of Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree, with 1 being Strongly Agree and 5 being Strongly Disagree. The 36 items measure six categories of learning styles: independent, dependent, collaborative, competitive, participative, and avoidant learners. The lower the number, the stronger that preference is for the respondent.

Categorization of the respondents into nonparticipants, noncompleters, and completers occurred based on their participation level in the learning course sequence for the Council during the year 1986-87. Nonparticipants are those volunteers who took no courses during 1986-87. Noncompleters took one or more courses in the fall of 1986, but no courses in the spring of 1987. Completers took courses in the fall and in the spring.

Once I determined the classification of learning styles and participation, I conducted 30 interviews to determine the individuals' cognition of their learing styles; the decision process to participate or not participate i nthe learning opportunities; and the relationship of their preferred learning style to their decision. I selected the interviewees by noting those volunteers who scored a strong preferece on the GRLSS in one of the learning style categories. I dropped the category of Competitive because it measures a style more applicable to formal educational settings than the nonformal learning situations found in the Girl Scout courses. I then identified two people from each of the five learning style categories (ten people) and who were in one of the three participation groups, which gave me 30 interviews to conduct.

In addition to structured questions, the interviewee sorted cards with various learning activities into a pile of preferred activities and one pile of disliked activities. The learning activities corresponded to the six learning styles. Then from the preferred pile, the volunteer chose five cards with which she most agreed. Based on preliminary analysis of the 30 interviews' card sorting, the most pertinent descriptions of learning preferences are summarized next.

LEARNING PREFERENCES

The following descriptions are not the complete descriptions give by Grasha-Reichmann. They are th ethree most frequently mentioned descriptions after being selected as one of the interviewees' top five preferences.

Independent learner:

like problems that give them an opportunity to think independently;
learn the content/subject matter they feel is important;
like projects the learner can design;

Dependent learners:

like outlines so they can take notes;
like well-organized lecturers;
like outlnes or notes on the board;

Collaborative learners:

like leader-group interaction;
listen carefully to what others say in courses;
like talking about course issues outside of the course with other learners

Participative learners:

like enthusiastic presentations of material;
like leaders who can analyze and synthesize material well;
like opportunities to discuss material;

Competitive learners:

like to ask questions;
like to be a group leader in discussions.

Avoidant learners:

The interviewees chose no learning activities which reflected preferences as an avoidant learning style.

Based on 12 of the 30 interviews, regardless of the learning style score, three learning preference themes begin to develop. Enthusiastic presentations, involvement in the course and the learning activities, and materials emerge.

Volunteers want enthusiastic presentations as a source of motivation and excitment. They look to the leader to be dynamic, creative, interesting, well-prepared, flexible, and knowledgeable. They prefer a leader who exhibits an eagerness for the participants to learn and who allows feedback, and someone who feels comfortable as a part of the group and not set apart from the participants.

The volunteers stressed involvement in their learning. Participatory learning through groups and breakout sessions promotes interaction among people and sharing new ideas and different perspectives. The interviewees want to learn from others' experiences. They also want to be active, doing something with the information, not just listening to one person. Songs, games, getting up and meeting people, hand-on work, and demonstrations were just a few of the suggestions for involvement.

The learners appreciate materials in the form of hand-out. The volunteers seek information and solutions to problems that we can take home and read again. Outlines help to clarify points and provide the learner with the means of knowing the expectations and accomplishments in the course.

FACTORS OF PARTICIPATION

The following factors of participation are based on the participation categories, irrespective of the individual's learning style. When analysis is completed, I will be cross checking styles against participation categries, but for now, the factors of participation are not directly related to one particular learning style.

Nonparticipants are those volunteers who had not participated in a learning course during 1986-1987. Other volunteers' comments, or other coruses tken in previous years, form the basis for their perceptions of the courses. Their perceptions are not positive about the courses and build barriers which are difficult to o ercome, especially when, as one volunteer said, "I don't have a buring desire to learn."

Therefore, the level of importance of the courses becomes minimal. The volunteers see the courses as a waste of their time or procrastinate deciding to attend. They discussed situational factors which prevented them from attending. Distance to the location, scheduling of the courses, other priorities such as job or family, and physical comfort were some of the barriers mentioned.

Some learning preference concerns surfaced for those with limited experience, either through courses taken previously or community meetings they attended. The meetings were so mishandled because of poor group facilitation, I really had to question the competence of the leaders who also were the trainers for certain courses. They wre read to, talked down to, and their intelligence was insulted. They were bored and felt the material was repetitious. They wanted courses to provide something useful to me. Their previous knowledge and experience were not capitalized upon. Therefore, decisions to not participate were made.

Noncompleters are those volunteers who took one or more courses during the fall of 1986, but none in the spring of 1987. For this group, their experience in the course weighs heavily on their decision to continue or to stop. As with the nonparticipants, the noncompleters stressed situational factors. Energy level, obligations to family and other priorities, distance, taking time from their job, child care, and the schedulng of sessions presented problems.

They did not like being read to when we had the material to read on our own. They did not want to listen and do nothing. They interpreted the approach of the leader as too simplistic, as treating them as eighth graders. The noncompleters suggested that the course be applicable to their situations and to their level of experience.

Completers are those who participated in courses both during the fall and the sprng of 1986-1987. In comparison to the other two groups, this group had more courses on which they based their experiences and preferences.

The completers centered their idscussions more on process issues than on situational factors. Talkative people who dominated discussions and their own inhibitions about being in front of people are two examples. Completers did mention such factors as family, distance, and transportation concerns, but those factors were secondary to the course issues.

Completers relied heavily on their previous experiences to aid them in their decision about which courses to attend. Completers were much more adopt at selecting appropriate courses for their learning preferences. Unclear course descriptions were a concern because more detail about the course would aid appropriate linkage. However, they did still encounter inappropriate situations such as being treated as a first grader or leaders who did not acknowledge the participants previous experiences.

Learning Style Influence

For all three groups, learning styles influence their decision to participate. Nonparticipants had less knowledge and experience upon which to base their decisions and often assumed more about courses than the other two groups.

Noncompleters definitely rely on their learning preferences to influence their decision. If they knew the course would be a hands-on session, they went. If reading or looking at a handbook constituted the format, they stayed home and read the handbook themselves. Some noncompleters, based on their learning preferences, gravitate towards discussions and hands-on courses because they want involvement, not sitting and listening. Some noncompleters have chosen to no longer attend because of previous negative experiences.

Completers also definitely rely on their learning preferences and have attended enough courses to know which ones are appropriate for them. They know which ones to avoid. For some, they are so adopt at selection they they haven't attended one that doesn't match their style. If a mismatch is likely to occur, some completers decided how much they wanted to know the content of the course.

SUMMARY

Limitations of study

This paper is limited by the fact that only preliminary analysis has been done thus far. But beyond that, some limitations of this research should be noted. First, qualitative researchers have limited capacity for processing the rich detail of their materials (Fielding and Fielding, 1986), and I am no exception. I have been amazed by the wealth and richness of the explanations and situations of the volunteers I interviewed, and I only can begin to uncover and present a minutes portion of their experiences. Another limitation is using the sample of the Girl Scouts. While I feel they are a comparable organization to many other volunteer organizations, I cannot make the adaptation of these findings to each reader's particular circumstance and cannot generalize to the volunteer field as a whole. But I hope that this study benefits volunteer administration and continuing education for volunteers.

Implications for Educators of Volunteers

Practitioners must take seriously the tasks they have before them in planning and carrying out the courses. Volunteers who attend those courses consider future involvement based on their experiences in a course. For leaders who believe in continuing education for volunteers, a negative experience could have disastrous consequences.

Noncompleters and completers reflected upon their memorable experiences in courses. Three themes begin to emerge: the people, learning growth, and attitude growth. The other people in the courses and an approachable leader made the effort to attend courses worth their while. Leaders who were encouraging, easygoing, and pleasant created memorable experiences for the participants. Learning growth, both personal and in content knowledge, occurred because they could use the course material in their own situations and events. Attitude growth happened when the participants were enthusiastic and motivated. The courses were fun for them. Some view themselves as lifelong learners, I got real hooked! Planners, educators, instructors, volunteer administrators, and other leaders must capitalize upon those memorable experiences, striving to hook those leaders into continuing education which is pertinent and valuable to them as volunteers.

However, learning occurs beyond the formalized structure of courses. Practitioners can provide the means for enabling the volunteers' learning at home or during their volunteer experience. Methods exist for conveying information to volunteers besides through a course. Practitioners can use those methods to meet the diversity of learners, especially for independent learners.

Educations need also to inspect the variety of courses offered to the volunteers. The type of course content dictates to some extent the structureo f the course, and volunteers recognize that. If the course is a highly still related course, such as first aid, the volunteer recognizes there is no latitude for providing first aid. They therefore expect an expert as leader and more structure to the course. If the course is more values or issues oriented, the learners see no need for an expert. Rather they want to rely on their experiences as adults and share those experiences through discussions. Factual courses present the need for interesting speakers, perhaps by lecturing and using some visual aides.

Volunteers are not hesitant to learn. Practitioners can apply adult learning and learning style theories to volunteers' learning experiences and enhance the lifelong learning process.

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A SELF-DIRECTED LEARNING PROGRAM WITHIN CONTINUING PROFESSIONAL EDUCATION

Judith Klippel DeJoy[1]
Helen Mills[2]

Abstract

Self-directed learning opportunities may provide an alternative way for professionals to update their knowledge and enhance performance. The Personal Adult Learning Lab, at the Georgia Center for Continuing Education, University of Georgia, is providing self-directed learning experiences within a continuing education environment; conference participants "connect" with the Learning Lab in a variety of ways. Strategies for integrating self-directed learning with traditional educational structures are discussed.

Society has become increasingly dependent on the professional's specialized training, competence, and performance "on the job". As these pressures have grown, the field of continuing professional education (CPE) has developed from a short course/residential setting format to a wide range of efforts to provide learning experiences for active professionals (Houle, 1980).

Current issues in CPE include questions about how to implement self-assessment mechanisms for professionals who must keep updating their knowledge base, how to encourage higher performance standards, and how to provide support for professionals' career shifts. A common theme emerging from these issues is the idea of individual responsibility for professional growth and competence, with a view to the professional as a self-directed learner.

At the University of Georgia's Center for Continuing Education, the Personal Adult Learning Lab (PALL) is a testing ground for the utility of self-directed learning strategies for CPE within a residential conference environment. This paper will describe the concept of the Learning Lab, the development and implementation of the program, and several implications for practitioners.

THE CONCEPT

The Georgia Center for Continuing Education is a major continuing education facility operating within the context of a land-grant state higher education institution. The Georgia Center opened in 1957 under the auspices of a W. K. Kellogg Foundation grant. Serving working professional adults interested in non-credit continuing education opportunities, the Georgia Center offers services to some 90,000 adult learners annually, with about 35,000 of these adults attending conference activities within the Center itself.

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In 1984, a Kellogg Foundation grant was awarded to the University for application in four major service units; one of these units included the Georgia Center and involved the development of a self-directed learning lab for adults. The Personal Adult Learning Lab was created to provide a learning environment which could facilitate self-managed learning efforts by adults and to explore the phenomenon of self-directed adult learning.

In the past 15 years, a good deal of attention has been paid to the nature of adult informal learning, specifically, learning efforts initiated and sustained by the individual adult learner in a self-managed way. While a variety of views exist as to whether such self-directed learning efforts are the result of a considered planning process (Tough, 1979), the impact of particular circumstances (Spear & Mocker, 1984), or represent a non-linear process of activity and reflection (Brookfield, 1986; Danis & Tremblay, 1987), the common theme remains that of learner control of the learning process. The notion of control or management suggests the need for both self-assessment and a variety of activities and resources, in order to facilitate a match between identified needs for information and available sources of that information.

The Personal Adult Learning Lab was created to provide an environment supportive of individuals learning at their own pace, on their own time schedule, as their need or interest dictated. The Lab was designed to facilitate an individual learner's plan for a learning project without dictating the course of the learning experience or the instructional outcome.

PROGRAM DEVELOPMENT

A survey of conference participants was conducted in 1984; the results suggested several generic content areas which would be helpful to a wide variety of professionals: Management and Communication Skills, Computer Training, and Career Awareness.

In order to support self-directed learning efforts, all the instructional resources chosen for the Learning Lab were self-instructional and self-paced. A variety of learning formats have been made available: computer-assisted instruction packages, interactive video materials, videotapes, audiocassettes, self-assessment instruments, workbooks, and study manuals.

The Learning Lab is presently housed in a converted office space with four workstations available and has easy access to the 1400 volume library on the same hall. Currently, the Learning Lab is open daily on weekdays, including one evening, and the standard fee schedule is $10.00 per hour, with the first 30 minutes of each appointment free.

One full-time staff person has primary responsibility for supervising the use of the Lab, and several additional staff members are also available to help individual users with their assessments of learning needs, choice of materials, referrals to other resources, and personal evaluation of the learning experience.

PROGRAM IMPLEMENTATION

The Learning Lab has been operating since May, 1986. Presentations are made on a regular basis to as many conferences as possible and most conferees receive a packet of Lab materials.

Demonstrations of particular instructional resources, such as computer-assisted instruction (CAI) programs, have been given to several conferences, illustrating a self-directed learning strategy for supplementing the conference experience.

When program planning permits, pre-conference letters with registration forms are sent to registered conferees, allowing them to make appointments for the Learning Lab before they actually arrive at the Center.

The ultimate goal of the Learning Lab with regard to providing self-directed learning opportunities to adult professionals, however, is to make what we call the conference **CONNECTION**. When a particular professional conference makes the Learning Lab part of its agenda, in some way, we identify that as a conference CONNECTION.

The first CONNECTION was made in November, 1986, when a conference group leader scheduled the Sales Skills Assessment program for members of his group. The program complemented the conference objectives, and many of the conferees who used the Lab returned on their own time.

The next CONNECTION occurred in February, 1987, with the County & Municipal Clerks Certification Program. Specially reserved times for appointments were made available to participants. A selected list of instructional materials approved by the corresponding association was provided to each conferee. Individuals using the Lab during this conference were able to choose the learning format they preferred (CAI, videotape, cassette) and earn certification credit for their self-directed work in the Learning Lab.

During the past year, the Lab has also been available to selected conferences as a concurrent session for participants or during times reserved for the conference members only.

A complete record (name, resources used, time spent) is provided to all the conference leaders involved in a CONNECTION, so it is possible to document the professional's participation. And for all the conference CONNECTIONS, the $10.00 per hour fee is reduced to $7.00 for all the conference participants.

PROGRAM EVALUATION

All Lab clients complete an information/evaluation form and this data forms the basis of our current conclusions about the instructional materials, the learning formats, and the general learning experience.

The professionals using the Lab clearly are most interested in instructional materials on management skills topics; 74% of all materials chosen by the conferees were management-related.

When asked to choose which of several components of the Lab (CAI, facilitator, reading materials, videotapes) were "helpful factors," 79% of those responding answered "CAI" and 57% identified the "chance to talk with a facilitator." In an effort to solicit a range of responses, this question was re-written as an open-ended question, starting in May, 1987. In response, 77% of conferees answered "the opportunity to pace myself" or "go step-by-step."

In response to a question about their "next step," some 26% of those responding wrote that they planned to complete the learning program at the next opportunity; 23% indicated that their next step was to "apply" what they had learned. Only 10% referred to taking a course as their next learning step.

A variety of spontaneous comments by Lab users suggested their interest in this self-directed alternative to the lecture and workshop format of the conference and their pleasure in realizing how much they could do on their own.

One issue related to instructional materials has emerged as particularly significant to the Learning Lab concept: the degree to which learning materials are, indeed, self-instructional and amenable to the needs and style of the adult learner. We have identified a number of characteristics to be considered in instructional design in order to afford the learner the opportunity to "control-manipulate-shape" the information. Among these characteristics are: repeated practice opportunities, adjustable levels of difficulty, control of sequencing, and the opportunity to stop and return without repeating. Where materials do not demonstrate these characteristics, it will likely that the self-directed learning experience will be seriously compromised.

IMPLICATIONS

The Learning Lab has been operating for over a year and a half and our experiences indicate that adult professionals can choose and make use of available learning resources in a self-directed fashion, as well as evaluate their experiences. The physical presence of the Lab within the residential conference center makes access to supplemental and enrichment learning materials easy, particularly when the CONNECTION between conference program and Lab is made.

While our experience has been with commercial learning materials at this time, the logical extension of the conference CONNECTION idea is to consider developing instructional materials "in-house" which would be supportive of specific conference programs.

Further development of the CONNECTION concept lies in the integration of self-directed learning experiences with existing education structures, such as the continuing education conference. Individuals using the Lab for self-directed learning experiences can rejoin the conference group for general discussion and conclusions. In the case of final tests or exams for evaluating competence, the self-directed learning content could be incorporated into the exam. Approval from the relevant association or continuing education agency to use self-directed learning opportunities for certification credit would also integrate these two educational formats.

It has been suggested that the professional may be most motivated to pursue further education at the time of a "significant change," such as a new assignment, a change in the staffing pattern, or joining a new work team (Sexton-Hesse, 1984; Zemke, 1985). Self-directed learning programs may be able to meet the individual's needs at this "teachable moment."

Self-directed learning programs could also provide self-assessment experiences to be used in the development of curriculum customized to the individual professional. Assessment materials could be developed to evaluate experiential background and learning style, as well as traditional education experience. Houle (1980) emphasizes the need for such a reorientation in his case for the "revised CPE professional."

Publication Note. This is a summary of preliminary findings. This summary is not intended to preempt publication of the full report, nor is it considered prior publication of it.

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RETIREMENT PLANNING: ISSUES AND APPROACHES FOR EFFECTIVE PROGRAM DEVELOPMENT

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Abstract

The primary purpose of this descriptive exploratory research was to investigate retirement planning activities among a group of older adults in order to provide information which could be of value to service providers in their structuring of retirement activities for clients. Three major conclusions were that the majority of respondents were involved in retirement planning across a broad range of issues, that most respondents chose self-directed methods for the study of the great majority of issues, and that the percentage of study of many retirement planning issues increased among post-retirees.

INTRODUCTION

Until this century, there was little need for retirement planning, since retirement and death were closely associated. People tended to work until health problems caused them to retire, usually a short time before death. Today the period of healthy functioning has been extended, and people are retiring earlier (Peterson, 1983). On average, a person retires with 20% of life still ahead. Retirement is now more accurately viewed as a normal span of mature life for which preparation must be in order for it to be meaningful and rewarding (McCluskey & Borgatta, 1981).

Providing employee services is one aspect of the broad human resource development function within an organization. Employees today are demanding better, more comprehensive and more personalized services. When these services are offered, both employees and the organization benefit (Tracy, 1981). One of these important employee services is retirement preparation programs. More and more demand for such programs exists among employees (Mikelman, 1981; Randall, 1981). In all likelihood the demand will continue to grow (Olson, 1981). Retirement planning is increasingly viewed as a joint responsibility of employee and employer (Montana, 1982) with the employer identified as the most preferred service provider (Love, 1984; Ossofsky, 1980). Given this situation, there is a growing need for guidelines to assist human resource development staff in their work of developing, coordinating and implementing these programs (Randall, 1981).

Tracy (1981) argues that regardless of type, effective employee services must be relevant to employee needs, values and preferences as well as company requirements. Effective retirement preparation activities must be built on a base of information that fulfills these criteria. A part of this needed information-base concerns how adults are currently learning about and planning for their retirement. Among the major pertinent questions which this study investigated are: What retirement issues are being studied? How are those issues being studied? What resources are being used to study those issues?

Much research in the field of adult education indicates that adults tend to approach learning in independent, self-directed ways rather than through formal programs (Brookfield, 1984; Penland, 1977; Tough, 1979). Is this true in the area of retirement planning? Is it true for some retirement planning issues, but not for others? Is it true for some groups of employees and retirees but not for others? This research sought answers to these important questions.

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METHODOLOGY

The purpose of this research was to investigate which among 25 retirement planning issues (considered important by the National Council on the Aging) are being or have been studied and how those issues were studied by a group of participants who were subdivided by sex, job status (hourly or salaried) and retirement status (pre- or post-retirees). If significant differences and/or relationships were found between certain retirement planning issues and approaches to the study of those issues, then this information could be applied by service providers in designing relevant retirement planning activities.

The population of this study was pre- and post-retirees from Philip Morris, USA in Richmond, Virginia. The total population from which the nonstratified random sample of 480 was drawn is 1477 adult, full-time workers between the ages of 50 and 65 currently employed and 839 retirees who have been retired for up to eight years. The current Pre-Retirement Planning Program (PREPP) has been available to all employees since 1977. Thus, all employees and retirees in the sample have had an opportunity to participate in the voluntary PREPP.

A written questionnaire "Survey to Help Improve Retirement Services" was mailed to sample members following a pilot study. For each of the 25 retirement planning issues, categorized in the seven general areas of financial, health, estate, interpersonal relationship, living arrangements, leisure and work options, and community services, each respondent checked whether s/he had done any planning in that issue, and, if so, how learning about that issue was approached. Seven possible methods of study were listed, with an "other" option as number 8. The first two methods (participating in the PREPP or in other programs available through churches, community colleges, or other organizations) were considered a formal approach. The other five methods (use or printed materials, news media, human resources -- friends, human resources -- family members and human resources -- experts) were considered an independent, self-directed approach. Use of both the formal and self-directed approaches for the study of an issue was considered a combination approach. The respondent was directed to check all approaches which were being or have been used for studying each issue.

Content and face validity of the instrument were established by an expert panel of three. A test-retest procedure for establishing instrument reliability showed a 72% consistency of response.

A total return rate of 51% was achieved. Overall, salaried personnel, whether men or women, pre- or post-retired, had the highest response rate. The lowest response rate was among pre-retired hourly women, 22%. Pre-retirees were represented in the study by 122 respondents, 8% of their population, and constituted 52% of the respondent group. Post-retirees were represented in the study by 113 respondents, 13% of their population, and constituted 48% of the respondent group.

Descriptions of which retirement planning issues are being or have been studied and what approaches were used in that study were measured in frequencies and percentages. Phi coefficients were used to measure the strength and direction of association between the dichotomous variables. Two by two chi-square tests measured the differences between subgroups for issues studied, at the .05 level of significance. A second set of 1 X 3 chi-squares measured the relationship between each retirement issue and the approach used by the total group of respondents to study that issue, at the .05 level of significance. A third set of 2 X 3 chi-squares measured the differences between subgroups in their approaches to the study of each retirement planning issue, at the .05 significance level.

FINDINGS

Study of Issues

There were wide differences in percentages of reported study of retirement planning issues when analyzed both as the total group of all respondents and as grouped by the independent variables of sex, job status, and retirement status. When viewed as seven general retirement planning categories, the rank order of study by all respondents was: first, financial planning (75%); second, health care (65%); third, estate planning (62%); fourth and fifth, interpersonal

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relationships and leisure and work options (both 55%); sixth, living arrangements (44%) and seventh, community services planning (38%).

The largest number of differences within subgroups in the retirement planning issues studied occurred in the retirement status subgroup. At the .05 level, significantly higher percentages of post-retirees reported studying 20 of the 25 retirement planning issues. Smaller differences were found within the other subgroups. At the .05 level, significantly higher percentages of women than men reported studying four of the issues: myths and realities of aging, importance of maintaining and/or establishing friendships, impact of losing a spouse and/or loved one, and learning to adjust to more free time in retirement. Significantly higher percentages, also at the .05 level, of salaried than hourly respondents reported studying the three estate planning issues: preparing legal documents, inheritance concerns, and estate and gift taxes.

Approaches to Study of Issues

A significant relationship was found between 22 of the 25 retirement planning issues and the approach used to study these issues by all respondents. Nineteen, or 86%, of these 22 issues were more often learned about through an independent, self-directed method. Of the other three significant issues, only one issue, company pension benefits, was reported studied more often through formal programs (42%) than through a combination approach (41%). The study of Social Security benefits was more often studied through a combination of approaches (52%). The issue of adjusting to having more free time in retirement was reported studied about as often by a combination approach (40%) as by a self-directed method (42%).

No statistically significant differences in the approaches used to study the 25 retirement planning issues were found in the independent variable subgroup by sex. Within the job status subgroup, pursuing hobbies and/or special interests and approaches to that issue were found to differ significantly between hourly and salaried respondents. Pre- and post-retirees differed significantly in the approaches used for the study of three issues: company pension benefits, making an investment plan for added income, and adjusting to having more free time in retirement.

CONCLUSIONS AND IMPLICATIONS

Interpretation of data from this study supports the following general conclusions: 1) A majority of all respondents are making or have made retirement plans across a broad range of issues. Financial planning issues are considered of primary importance to all employees, both pre- and post-retired. Health, estate, interpersonal relationships, and leisure and work options are important categories of retirement planning issues which are studied by a majority of respondents. Living arrangements and community services planning issues are of lesser importance to most respondents. 2) There is little difference between men and women and hourly and salaried respondents in their reported study of issues. 3) The percentage of study of many retirement planning issues increases among post-retirees when compared to pre-retirees. 4) Most respondents chose self-directed methods for the study of the great majority of issues, even though a comprehensive formal program which included many of the same issues was available to them. 5) There is little difference between men and women, hourly and salaried, and pre- and post-retirees in their reported approach(es) to the study of issues.

The major findings of this study, a measure of actual retirement planning behavior among a group of pre- and post-retirees, carry important implications for persons charged with the design and implementation of retirement planning activities. Possibly the most important implication lies in the area of program format. While the trend is toward more comprehensive retirement planning programs, data from this research would tend to support the need for limited formal programs, with financial planning issues being the major content area. The same program could also be offered to all participants, given the few differences between men and women and hourly and salaried employees which this study found.

This study revealed an interest on the part of a majority of respondents in the study of a broad range of retirement planning issues beyond financial ones. However, the actual planning behavior reported indicates that these other issues are much more likely to be studied through self-directed methods. Therefore, it would be most helpful if resources for self-directed learning could be provided through the appropriate department. Suggested resources include: 1) resource files with pertinent content on specific planning categories; 2) resource libraries with more in-depth information, including bibliographic services, for a wide range of retirement planning issues; 3) personal learning labs with computer-assisted, possibly interactive, resource programs; 4) media lending libraries with instructional audio and/or video cassettes for home use; 5) information centers with areas for announcements of special television programming, community events, or other important information concerning retirement issues; 6) an ongoing retirement column in employee newsletters which are also mailed to post-retirees, and 7) opportunities for peer resource networks, or networks linking post-retirees who have information to pre-retirees seeking that information or vice-versa.

Another finding with broad implications is that many retirement planning issues are studied by an increasing percentage of post-retirees into their retirement years. It is suggested that retirement planning practitioners make the learning resources listed above available to post-retirees. In addition, especially where retiree groups meet regularly, surveys of the group's retirement needs would provide relevant data for the design and implementation of ongoing retirement programs and/or activities.

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A MATRIX APPROACH TO MARKET SEGMENTATION AND POSITIONING FOR CONTINUING PROFESSIONAL EDUCATION PROGRAM DEVELOPMENT

Mary Elaine Kiener[1]

Abstract

This paper describes a three-dimensional matrix approach to continuing professional education program development within a land-grant university environment that utilizes the concepts of market segmentation and positioning to promote a balance between carefree brainstorming and careful fiscal responsibility.

INTRODUCTION

To be successful in today's climate of fierce competition among a variety of continuing education providers, program planners must be creative and flexible enough to identify and pursue appropriate, yet untapped markets. Economic realities such as "Continuing education programming needs to pay for itself _and_ be profitable" offer useful bottom-line criteria for program development, but provide minimal assistance for identifying possible programs. On the other hand, innovation and creativity need to be tempered with a concrete understanding and acceptance of current realities within the organization. An approach is needed to continuing professional education (CPE) program development that promotes a balance between carefree brainstorming and careful fiscal responsibility.

Concepts such as market segmentation and positioning provide the basis for market research activities within many business enterprises, yet are less commonly utilized by continuing education providers. Utilization of these strategies, Azzaretto (1987, p.50) argues, will help create the most successful and best-managed CPE programs of the future, by enabling program developers to move beyond more traditional needs assessment practices by systematically testing the institution's resources against client needs and interests. This paper describes a three-dimensional matrix approach to CPE program development within a land-grant university environment that utilizes the concepts of market segmentation and positioning.

MARKET SEGMENTATION

The first dimension of the matrix identifies potential markets for CPE programs, while the second dimension outlines types of CPE programming that are available. The three aspects of the university's mission comprise the matrix's third dimension. Consideration of individual cells within the matrix allows the program development staff to creatively explore a wide range of programming ideas within a comprehensive and cohesive set of parameters, thus facilitating the process of market segmentation.

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Another, more integrated interpretation, begins with an assumption that the university serves as a primary source of the new knowledge that forms the basis of professional competence for most professional disciplines. Within this perspective, the three components of the land-grant university's mission can be seen as activities related to the generation of new knowledge (research), dissemination of new knowledge (education) and application of new knowledge (service). Inclusion of all three components as part of the matrix, thus adding a third dimension to the matrix (Figure 1), is not only appropriate, but imperative if CPE is to be a viable part of the university's overall function.

Since the incorporation of new knowledge into practice is essential for practicing professionals as well as professionals-in-training, this interpretation also implies a university-wide commitment to lifelong learning. Differentiation between the three types of activities enables the CPE program staff to better meet the continuing learning needs of professionals at all stages of professional development. For example, nurses at differing levels of career development utilize conference attendance to meet differing goals. While a more novice nurse may attend to gain more information, the expert nurse--who may be writing or conducting research within the topic area--may benefit more from the increased networking possibilities.

Utilization of the Matrix. The matrix provides a basic framework for CPE program development activities, but can be utilized in a number of different ways. In each approach, however, systematic attention to individual cells within the matrix structure encourages comprehensive, yet creative program planning. Several examples may help to clarify its use.

1. Expansion of a current program topic. Suppose that the CPE program unit has successfully offered Program X for a period of time, but has traditionally offered it as a one-day workshop targetted toward staff nurses. Starting with a specific program topic, the program staff can generate additional types of offerings, by brainstorming--cell by cell--new relationships among the topic, potential markets, types of programming and aspects of the university mission. Compilation of all generated ideas will provide the basis for the second step of the program development process, positioning.
2. Development of a new program topic. In this instance, the program unit is presented an opportunity to offer a new program. Utilization of the matrix can facilitate the decision-making process by allowing program staff to brainstorm potential uses of the program. For example, the staff may decide to reject a proposed program Y because it has limited applicability throughout the matrix in favor of program Z which has more widespread applicability.

POSITIONING

Positioning comprises a second step in the program development process by comparing characteristics of the program unit with the targeted market segment and likely competitors. One could visualize this process as a filter which identifies organizational resources and priorities. A number of strategic variables, when examined within the context of the entire university and/or the specific program unit within the university system, comprise this organizational filter (Figure 2). Once identified--although it should be reexamined on a periodic basis--this filter provides a stable reality structure with which to evaluate the previously generated programming possibilities.

Figure 1.

Three dimensional matrix approach to CPE program development.

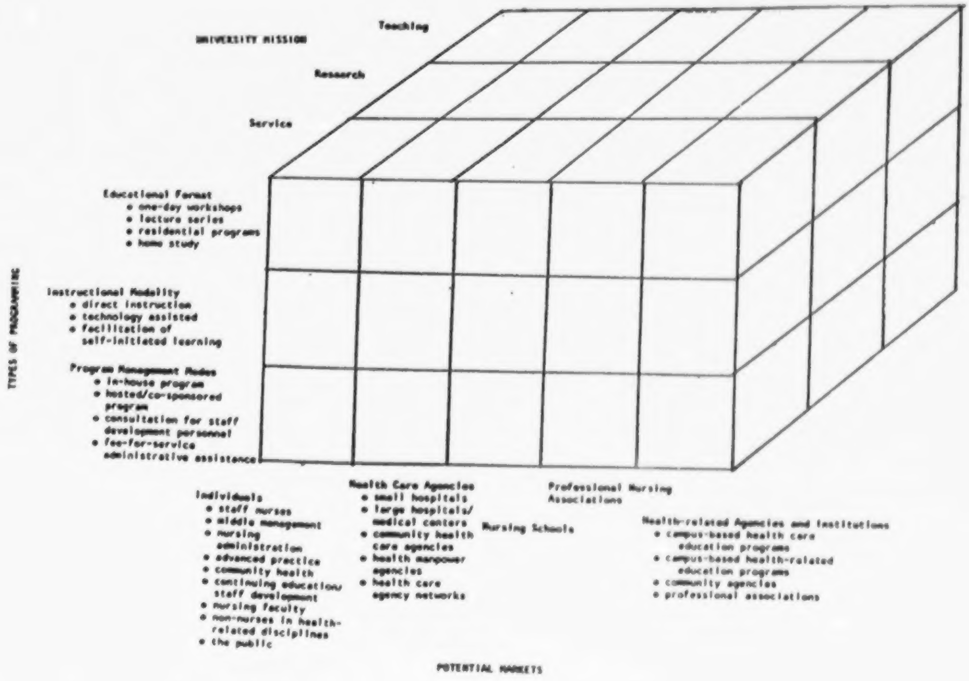
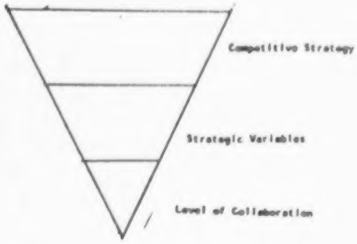

UNIVERSITY MISSION
Teaching
Research
Service
TYPES OF PROGRAMMING
Educational Format
• one-day workshops
• lecture series
• residential programs
• home study
Instructional Modality
• direct instruction
• technology assisted
• facilitation of self-initiated learning
Program Management Modes
• in-house program
• hosted/co-sponsored program
• consultation for staff development personnel
• fee-for-service administrative assistance
Individuals
• staff nurses
• middle management
• nursing administration
• advanced practice
• community health
• continuing education/staff development
• nursing faculty
• non-nurses in health-related disciplines
• the public
Health Care Agencies
• small hospitals
• large hospitals/medical centers
• community health care agencies
• health manpower agencies
• health care agency networks
Nursing Schools
Professional Nursing Associations
Health-related Agencies and Institutions
• campus-based health care education programs
• campus-based health-related education programs
• community agencies
• professional associations
POTENTIAL MARKETS

Figure 2.

Filter of organizational priorities and resources


Competitive Strategy
Strategic Variables
Level of Collaboration

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Potential Markets. Five types of markets have been identified for the College's CPE programs: individuals, health care agencies, nursing schools, professional nursing associations and health-related agencies/institutions. Each of these is then divided into specific market segment categories. For example, types of potential individual participants include staff level nurses as well as those in middle management or higher administration. Specific areas of nursing practice (e.g., community health, advanced practice, staff development, nursing faculty, etc.) also provide appropriate distinctions between individual types of potential learners. Lastly, two categories of potential non-nurse learners--non-nurses in health-related disciplines and the public--are considered.

The second type of nursing CPE market, health care agencies, can be divided into five categories. These differentiate between small hospitals, large hospitals/medical centers, community health agencies, health manpower agencies and health care agency networks. While the third and fourth types (nursing schools and professional nursing associations) could be further differentiated by sub-categories during the subsequent brainstorming process, they have not been divided at this stage.

Health-related agencies/institutions, the fifth type of potential market is divided into four distinct categories. Two categories describe campus-based programs: health care education programs (e.g., Colleges of Human Medicine, Osteopathic Medicine and Veterinary Medicine) and health-related education programs such as human ecology, music therapy and medical anthropology. The other two categories refer to non-campus-related organizations.

Types of CPE Programming. Three major areas of programming are addressed by the second dimension of the matrix. The first, educational format, refers to the format in which the educational programming takes place and includes such categories as one-day workshops, lecture series, residential programs and home study.

Another area, instructional modality, refers to the role of the instructor in the educational program. For example, direct instruction refers to a program in which the instructor is physically present during all sessions of the program, while technology-assisted programming refers to the use of mediated instruction (e.g., videotaped lectures, teleconferencing, etc.). Facilitation of self-initiated learning, the third category under instructional modality, refers to the instructor's role as a facilitator or resource person in an independent learning project.

Because organizations have different types of programming needs, as well as different resources from which to draw, the Division of Lifelong Education has devised a number of program management modes, which comprise the third area of programming in this dimension. These program management modes include in-house contracts, hosted or co-sponsored programs, consultation for staff development personnel and fee-for-service administrative assistance.

Land-Grant University Mission. Continuing professional education program planning within a land-grant university presents unique challenges and opportunities for the program developer. In this type of environment, major emphasis is placed upon fulfillment of the university's tri-partite mission, encompassing all three areas of education, research and service. Traditionally, continuing professional education is viewed as a part of the service component of the university's mission, in contrast to the educational component which includes only instruction conferring academic credit. Such a perspective would limit the program planning matrix to a serviceable two-dimensional view, but would not be able to capture the unique features of a land-grant university-based CPE program.

Identifying a competitive strategy. According to Porter (1980), three generic positioning strategies are possible: overall cost leadership, differentiation and focus. Typically, a university is not able to establish a cost leadership strategy because of its high overhead costs. The choice remains between a differentiation strategy, which seeks to establish and maintain a unique image or reputation, and specialization, in which the scope of provider activities focus on a particular group of learners, geographical region or subject area.

Once a basic strategy has been defined, examination of a number of strategic variables provides a composite picture of the provider's overall competitive strategy (Baden, 1987). This portrait offers a basic overview of the program's strengths and weaknesses, preferred operating styles, and degrees of flexibility in responding to a changing environment.

Given the state-wide (and even world-wide) focus of a land-grant university, assessment of the CPE's level of interdependence or collaboration with other CPE providers (Cervero & Young, 1987) provides another valuable component to the unit's overall competitive strategy or positioning within the competitive marketplace. Because of the organization's vast outreach potential, an ability to work more collaboratively with other providers will serve to enhance the university's image and decrease the overall cost of programming while better serving learners' needs.

THE ROLE OF POSITIONING VIS-A-VIS MARKET SEGMENTATION

As presented in this paper, it might appear that use of the market segmentation matrix would precede the process of "filtering" programming ideas through the organization's priorities and resources. When using the matrix to expand current programming, this sequence would indeed be the most logical. On the other hand, if the program unit is presented with a number of potential programming possibilities, as in the second example, an initial filtering process would eliminate obviously unsuitable projects. It is also possible that the filter itself, by identifying programmatic strengths, would offer initial ideas that could be further developed during a brainstorming session utilizing the matrix as a tool.

CONCLUSION

Continuing professional education within a university setting, to be successful, requires a business-like approach. Experts predict that utilization of business-based market research strategies such as market segmentation and positioning will typify the most successful and best managed CPE programs of the future. By utilizing the model presented in this paper, CPE program planners can incorporate these strategies into the land grant university environment.

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CONTINUING EDUCATION FOR UNIVERSITY FACULTY MEMBERS: A TRAINING PROGRAM FOR TEACHING ON TELEVISION

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Sally M. Johnstone [2]

Abstract

In developing a training program for university faculty members teaching on a live interactive television system, the authors followed Shanks' and Hochheimer's eight step planning process. The authors describe a short evening training program that uses the video medium to involve faculty members actively in the training process.

Various evaluative measures indicate that the program is highly effective. It is currently being widely adopted at colleges and universities across the United States.

The University of Maryland's Instructional Television (ITV) System was established in 1976 to provide graduate-level continuing education to engineers and scientists in the greater Washington area. The courses are delivered live, over an interactive microwave broadcast video network. ITV schedules over one hundred academic courses each year, with about 240 hours of programming being offered each week. The courses originate in one of ITV's four studio-classrooms on the College Park campus, each of which is equipped with cameras, microphones, television monitors, and other high tech features.

Like most ITV programs, Maryland's system links classrooms filled with traditional (on-campus) students with clusters of non-traditional (off-campus) adult learners. Faculty members who teach on ITV, therefore, face both technological demands and social situations foreign to them.

In an ideal world, faculty members would view teaching on ITV as a challenge and an opportunity to add to existing teaching skills. Typically, however, our faculty members discover that much of what worked for them in the traditional setting is not particularly effective over television. Not knowing how to modify their behavior to adapt to the new situation, they become frustrated, resentful, and generally resistent to ITV. Clearly, faculty members need guidance if they are to make the most of their ITV experience. At the University of Maryland, we have designed, tested, and are now offering, a short training program to help faculty members overcome their resistance to teaching on television.

About three years ago, the ITV system expanded rapidly. The number of broadcast channels doubled, with a concomitant increase in the number of courses and students. At the same time, a satellite delivery component through the National Technological University (NTU) opened University of Maryland classes to students across the United States.

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Almost at once, the ITV staff began to observe an increase in the level of resistance to teaching on ITV expressed by faculty members. Some of them spoke openly about their unhappiness. More commonly, they expressed their anxiety by refusing to consider the special demands of the ITV studio-classroom. Many ignored the limitations of the television camera, for example, and wrote equations that stretched across the entire classroom-wide board. This left the camera operator with two equally undesirable alternatives: to televise the material in pieces, or to pull the camera lens back until the entire equation could be seen at one time, but not read, because the letters and numbers would be too small to be seen clearly. By behaving like this, the faculty members were, in effect, rejecting their off-campus students. It was this increasing resistance that encouraged us to design a formal ITV orientation for faculty members.

Before designing our training program, we reviewed our files of the student evaluations which are routinely administered at the University each term. We also compiled data from the more informal ITV student "reaction reports" designed to encourage comments from off-campus students throughout the year. The results were clear. Although a number of different problem behaviors on the part of faculty members were cited, most fell into two categories: refusal to take the camera's limitations into account (as described above), and unwillingness to encourage off-campus students to take an active role in the class.

Having gathered this information, we proceeded with our design. We envisioned a short orientation session using the medium of video itself to illustrate the salient points we wanted to get across: that ITV teaching should be enjoyable, that ITV provided technological support far superior to that available in traditional classrooms on the campus, that ITV was a natural forum for experimentation, and that a successful ITV teacher was sensitive to the needs of both on- and off-campus students. Secondarily, we wanted faculty members to understand ITV's administrative requirements, and to be aware of the administrative support provided by the ITV staff.

Since 1982, when the Association for Media-Based Continuing Education for Engineers (AMCEE) published their monograph Towards Improved Candid Classroom ITV: Program Evaluation and Development Guidelines, Shanks' and Hochheimer's eight-step planning process has been a model for ITV program development (pp. B 7). We followed these steps (audience identification, determination of behavioral objectives, identification of content needed, selection of instructional strategy, production, formative evaluation, promotion, and summative evaluation) as we created our training program.

Our target audience was a group of University of Maryland professors, most of them engineers or computer scientists, many of whom had taught for decades. We knew from previous attempts at faculty training that this group would approach our program unenthusiastically, considering it a waste of time.

Our objectives were equally easy to identify. We wanted faculty members teaching on ITV to recognize and respond to the needs of their off-campus students by making effective use of the ITV studio-classroom and by avoiding the problem behaviors the students had identified. The desired content followed from this. We wanted to include both administrative information and technical guidelines.

Determining the instructional strategy was more difficult. On the one hand, we wanted to be as thorough as possible. Our assumption was that our target audience would be unlikely to pursue information not included in the training session. On the other hand, we knew that the program had to be relatively short and fast-paced. The session, therefore, was designed to begin with a buffet supper in a conference room near the ITV studio-classrooms. There is no video equipment in this room, and the faculty members interact informally for about half an hour before ran the formal program begins.

We start the program by introducing key ITV staff members, who lead a forty-five minute discussion of administrative matters. These include such topics as exam security, how to handle homework assignments for off-campus students, and the importance of meeting the courier deadlines. (ITV runs a daily courier service to all its local sites.) All of this information is also covered in a faculty handbook given out at the beginning of the session, and the faculty members are encouraged to refer to the handbook for more details.

Participants then move to a studio-classroom where the microphone and cameras are briefly demonstrated. Then they watch our seven-minute faculty training tape, which was created with the predominately male audience in mind. Thus, the primary role model is a man teaching a technical course, and humor is provided by sportscasters. The videotape, ITV Nationals, features Mel and Lou (the two sportscasters) who give a running commentary on the performance of Donald, an ITV veteran competing in the ITV National Competition. As Donald teaches, he uses all the special elements of the studio-classroom. He also commits several of the most common errors made by ITV teachers.

When the tape ends, the group spends about half an hour discussing Donald's performance. The faculty members point out his mistakes, what he did right, and how he might improve. Through this discussion, and always in the context of Donald, they are able to talk about teaching on ITV without having to confess their personal fears.

Finally, each faculty member spends a few minutes trying out the microphone, the board and markers, the camera over the desk, and the other special features of the studio-classroom. The practice session prompts questions about teaching techniques. and encourages further discussions among participants and the ITV staff members. At the end of the evening, the faculty members fill out a short evaluation of the program.

In the Fall, 1985 semester, the program was tested on a group of about forty faculty members, some of whom were veterans and some of whom were new to ITV. Overall, the participants reported that they had both learned from and enjoyed the training program. They were certainly less anxious about using the ITV system after they had had a chance to try it out and to talk with colleagues about it.

A further formative evaluation took place at the end of the semester, when the student evaluations were examined. There was about an 80% decrease in the number of complaints concerning faculty members' performance on ITV. In response to comments contained in the evaluations, we modified the program structure slightly.

Having determined that the training program was effective, we next devised a strategy to encourage our professors to attend these voluntary sessions. Faculty members new to ITV are sent a formal invitation to the program. They are then reminded of the time and place by a telephone call from the ITV secretary. The calls "sell" the program, and this system has proved to be remarkably effective. This year, almost 100% of the faculty members invited in this way attended the program, and both their evaluations and the faculty grapevine have been positive about the experience. A different strategy was devised for veteran faculty members, many of whom have taught on the system for several semesters without any special training. They are telephoned by the director of ITV himself, and encouraged to attend. This approach has proved only moderately successful. After five semesters, there are still some long-term faculty members who refuse to take part.

We have continued to review the student evaluations of ITV courses, and have seen a continual decrease in student complaints about faculty members. We have shared our program with colleagues across the United States and many of them have adapted it for their own uses. This year, Region II of the National University Continuing Education Association awarded our program a commendation in recognition of creative and exemplary effort in new programs in continuing education.

We continue to look for ways to improve faculty members' performance on our ITV system. For example, recently we completed a stand-alone student training tape which we hope will increase both the amount and the quality of the feedback our professors receive from their off-campus students. The Instructional Television System is an established delivery mechanism for education at the University of Maryland, and we are dedicated to maximizing the experience for the faculty members who take part.

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THE MUNICIPAL CLERK: A STUDY IN FUNCTIONAL PROFESSIONALISM

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Abstract

A mail survey to all 351 Municipal Clerks in Massachusetts was used to examine the functional role of the Municipal Clerk. The results indicated that there was no substantial difference among the clerks who are elected viz-a-viz those appointed and that certification may well be a substitute for formal education.

The Municipal Clerk, along with the Tax Collector, is the oldest of local government officials. The office of Municipal Clerk can be traced back to biblical times. In America, the Plymouth colony established the office of clerk/recorder as one of the first public officials. And of all the local governmental positions, the office of the clerk (city or town) has perserved and may be found in virtually every unit of local government in the world!

In Massachusetts the position regardless of whether it is found in a city or town and regardless if they are elected or appointed is best described by a blend of functions conditioned by:

1. State Law.
2. Municipal Ordinance or By-law.
3. The evolution of local custom and practice,within the individual municipality;
4. The volunteerism of the individual municipal clerk.

Regardless of the type and size of the municipality there are certain consistent mandated municipal clerk functions:

Keeper of Municipal Records
Recorder of Vital Statistics
Issuance of Licenses and Permits
Public Notice Filings
Town Meeting/City Council Participation, and
Chief Election Officer.

Depending on the community, and its clerk, the office may perform additional functions varying from Treasurer to Tax Collector to Justice of the Peace, or even all of these. The survey data which are summarized below were gathered as a result of the authors' mutual and on-going interest in the functions of local governmental administrators, in this case Municipal Clerk's, and related concerns regarding questions of managerial professionalism. The data were generated via a mail survey of all 351 Municipal Clerk's in Massachusetts. With a response rate of 84 percent, our conclusions are posted with a significant level of statistical confidence.

Relative to our interests in local administrative professionalism, we initially defined a concept termed functional professionalism, and coincidently developed three working hypotheses.

Functional professionalism is defined as follows: The opportunity for professionalism will be greatest when a person in a managerial position possesses the background and training to perform a specialized function in a conducive environment; and are coincidently compensated adequately to allow maximum concentration on the specialized function.

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Utilizing this definition relative to Municipal Clerk s, the following hypotheses were developed to facilitate analysis:

1. There is no substantive difference in functional professionalism between elected and appointed Municipal Clerks.

2. Performing one or more functions beyond those mandated for Municipal Clerk s tends to diffuse the impact of functional professionalism.

3. Municipal Clerk s working toward or in receipt of certification will perform their duties with greater functional professionalism than noncertified Municipal Clerk s.

Initially, we found that there are substantive differences between elected and appointed Municipal Clerk s. Those elected are paid less well, with salary disparities being most significant in the higher salary brackets. Also, appointed Municipal Clerk's in general perform fewer additional tasks, and are more likely to be certified or seeking certification. At first blush, the appointed Municipal Clerk appears more functionally professional.

Secondly, Municipal Clerk s with substantial lengths of service (i.e. over 10 years) do not demonstrate much interest in becoming certified. Moreover, seeking or receiving certification does not result in a substantial reduction in the number of additional tasks performed, but it does seem to be related to an increase in salary. However, the salary factor does not take hold until a salary level of $10,000.00 is reached. Consequently, the observed salary factor could also be a function of longevity or statute, as well as certification. For the Municipal Clerk earning less than $10,000.00 there appears to be little monetary reward for achieving certification.

Third, we observed from the data that receipt or non-receipt of certification does not result in a reduction in additional duties or a coincident increase in functional professionalism. In fact, a marginal trend in the opposite direction exists, i.e. certification coincides with an increase in the additional duties performed. (This trend may, in fact, be conditioned by the current environment of cutback management and fiscal entrenchment evident in most municipalities today. Or, it may reflect a professional tendency among Municipal Clerk s toward volunteerism).

Overall, we found that substantive differences do exist between elected and appointed Municipal Clerk s. However, we are unable to state with confidence that these differences necessarily reflect variation in the manner in which Municipal Clerk s approach functional professional as conditioned by the performance of additional tasks, or salary differentials, or the achievement of professional certification.

And lastly, that those Municipal Clerks who seek/obtained certification have a tendency to substitute this achievement for a combination of formal education and managerial experience and thereby strive to gain professional recognition in an acceptable and approved manner which is comfortable to them. In this regard some thought should be given to adjusting the certification process to be cognizant of this intent and thus provide them with the needed and necessary technical skills of these mandated functions as well as to acquaint them with some of the objectives of a "liberal" education.

A purely descriptive analysis of the data yields the following:

1. The median education of the Municipal Clerk s surveyed is high school.
2. The median age of Massachusetts Municipal Clerk s is between 46 and 60.
3. Most Municipal Clerk's have held their current position between six and eight years.
4. The median annual salary for Massachusetts Municipal Clerk s is slightly less than $10,000.00; one third earn less than $5,000.00. (The majority of the Municipality's are small with part-time Municipal Clerk's)
5. Ninety percent of the Municipal surveyed perform duties in addition to those mandated.
6. The median number of additional duties performed is two (2).
7. The median number of staff support for Municipal Clerk s is less than two; 46 percent perform their duties without benefit of staff support.
8. Over half of the Municipal Clerk s surveyed were active in local government and politics prior to assuming their current positions.
9. Only 19 percent of the Municipal Clerk s are professionally certified, and of those not certified, only 12 percent are working toward certification.

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A LONG-TERM, MULTIPLE STAGE NEEDS ASSESSMENT PROCESS FOR PROGRAM DEVELOPMENT

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Abstract

The purpose of this paper is to summarize an integrated approach to needs assessment for continuing professional education. The process is a long-term research effort with multiple stages. The data creates an aggregate profile of a professional population. Further, this profile becomes a synthesis when various theoretical orientations to continuing professional education, such as adult learning, are included in the assessment methods. The Pennsylvania State University's Office of Continuing Professional Education developed this approach in response to professionals' needs, societal changes, and program effectiveness studies. Research using the process has begun in three professions: clinical dietetics, clinical psychology, and architecture.

RATIONALE

In the multi-faceted milieus of professional practice, needs assessment no longer can be one dimensional. Within the professions, rapid change and specialization have complicated data gathering procedures and made "the representative sample" elusive. Employment circumstances and demographic variables also can alter job descriptions to the point that two practicing professionals with identical job titles have diametrically opposed responsibilities (Houle, 1981). This creates programming problems for both continuing education participants and planners. Very general educational activities--so designed to appeal to a wide group--risk appearing as only basic introductions devoid of advanced level material, relevant to practitioners. On the other hand, activities presenting specialized clinical topics, may indeed entice participants from a more restricted population fail to address more pervasive learning needs of the profession. Consequently, both situations may be threatened by program cancellations due to poor enrollment.

Rather than accept what seems to be a splintered reality within professions there may be another alternative. Providers of continuing professional education (CPE) activities could assume that vast professional diversity is the norm. By understanding fluctuations within the diversity, excellent and effective educational activities are still possible. One possible solution rests with needs assessment methodology (Knox, 1986): replacing single, episodic assessments with long-term, multiple stage research efforts.

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Differing professional identities, characteristics, responsibilities, and backgrounds require different assessments, produce different learning needs, and unfortunately all interact to influence program participation (Kaufmann, Stakenas, Wagner, Mayer, 1981). Therefore, although initial assessments could investigate the three basic components of program planning, educational topic preference, delivery methods, and format preferences, this data would be insufficient for detailed instructional design. Questions concerning the pervasiveness and priority of the preferences remain unanswered. The conditions under which the preferences are valid or the existence of any moderating demographic variables are also unknown. Further, are learning styles and the cognitive organization of information of a given profession unique? Each question adds valuable data that would contribute to a composite profile of a professional population.

METHOD

Since few CPE providers specialize in one professional population, the keys are systematic planning and proceding with multi-stage assessments. An initial investigation using a general interest inventory or a literature review of completed needs assessments among the targeted population are effective outline tools. From the patterns observed in these data, a more detailed plan can be developed. The following list presents an example of research questions that would be useful for subsequent assessments to elaborate initial, general perceptions of a professional population.

- Is the specific content implied from a topic's title understood?
- What depth of content is needed in a given topic?
- Of the most needed topics, what is the likelihood of attendance?
- Of the most needed topics, which include useful lifelong learning skills and are therefore of potential interest to other professions?
- What demographic variables of the participants' backgrounds would influence their attendance at any CPE activity?
    - highest level of completed education
    - number of years as a practicing professional
    - type of current position
    - type of primary work setting
    - geographic location of work setting
    - population density of work setting
- Of the preceding demographic variables, which describe the majority of the targeted profession in the provider's geographic location?
- What scheduling preferences will affect participation?
    - days of the week
    - times of the day
    - miles to travel
    - activity length

Successive assessments will depend upon the provider's familiarity with a given population, the available resources, and the perceived importance of the factors contributing to the observed trends and patterns (CCEU, 1984; Kaufman, et.al., 1981). Assessment methods can range from informal conversations with practitioners in a selected sample to extensive mail surveys done in cooperation with a professional association (Gagne and Briggs, 1974). But irrespective of the method, new data should address a specific question, contribute to the composite professional profile, and thereby facilitate effective program planning.

As assessments continue, sensitivity to change will become obvious through contradictory data, low enrollment or direct practitioner feedback resulting from the strong collaborative bonds continued contacts create between providers and the professional group. Additional contradictory data may result from the inherent problem in this hypothesis: needs assessment methodologies and the resultant data are rarely comparable, only compatible.

Direct data correspondence is not the goal; rather related insights are. In some cases, new information may provoke reinterpretation of the whole. New professional certification requirements may suddenly explain what appeared to be conflicting learning needs. Each assessment contributes additional perspectives and can refine or elaborate preceding information. This optimal integration and refinement only results from deliberate design and an entrepreneual spirit--to exploit every situation for new information. Consequently, developing a composite, but flexible profile of a professional population may be the single crucial resource for program development.

A composite is important for another reason: it permits a synthesis of approaches. A professional population and its learning needs can be examined from the standpoint of various bodies of thought: adult learning theories, lifelong learning postulates, and the effect of instructional systems design assumptions.

PRACTICAL APPLICATION

This theoretical base is being tested at Penn State's Office of Continuing Professional Education. The Office implemented a long-term, multiple stage needs assessment process with three professional groups. Each process is profession-specific and the resulting composite professional profiles are being used in program development.

One professional group is clinical dietitians in Pennsylvania. Stage one was a performance audit of professional skills. A literature review of dietitians' learning needs composed stage two. Stage three included focus group interviews and both written and electronic questionnaires. And currently, the research agenda has reached stage four: a statewide survey to 750 randomly selected practicing clinical dietitians across Pennsylvania.

Stage one, the performance audit, began under the Continuing Professional Education Development Project funded by the W. K. Kellogg Foundation and Penn State. Basing the identification of learning needs on an analysis of professional performance formed the base for practice oriented educational activities. The model for Penn State's efforts was the Practice Audit Model. The Practice Audit was subdivided into small research tasks, all of which were interrelated and cumulative: (1) describe the scope of clinical dietetics practice, (2) assess practitioner performance in selected areas, and (3) analyze the data. Assessment was limited to specific tasks and responsibilities within domains which were identified as those most important in actual work settings. Written case studies, client simulations with videotaped evaluation sessions, documentation exercises, small group interviews, and participant questionnaires were the assessment methods. The analysis of the results provided specific directions for initial program development. Not only were tasks and responsibilities of low proficiency addressed, but program format and delivery methods used were those discovered to be most effective for both the content and the professionals' learning needs (CCEU, 1984; Knox, 1986).

As Penn State's work with the clinical dietetics profession continued, several issues arose. The stability of the practice audit over time was questioned. What are clinical dietitians' perceptions of continuing professional education? Do self-perceived learning needs reflect the performance audit results? Does the difference between self-perceived needs and practice-evidenced needs determine one's motivation and program participation?

Two years after the practice audit project was completed, stage two began. During this time, a major concern was assessment cost. The unusual effectiveness and careful evaluation possible in a performance audit unfortunately require extensive time periods and tremendous human and financial resources. Further, the costs cannot be recovered through program registration fees without discouraging attendance. Other assessment methods would have to be investigated keeping in mind the shortcomings and inherent biases of each. The wealth of data from stage one encouraged Penn State to elaborate on that base rather than replace it. Therefore, an inexpensive tool that required minimal external input, but provided maximum information on self-perceived needs had to be designed. A comprehensive literature review met the need. The broad conclusions from stage two and practical needs of stage one became the data base for stage three.

Stage three was directed by two more concerns beyond cost reduction: (1) to determine how the reduced employer funding situation prevalent in Pennsylvania and other environmental factors have affected participation in continuing professional education activities and (2) to investigate the similarity between self-perceived learning needs and practice-verified ones. In 1987 focus group interviews and written and electronic questionnaire assessments were chosen to facilitate stage three of the long-term, multiple stage research effort. The focus group interview is a versatile assessment method. Not only is the focus group a financially inexpensive method, but it is appropriate for a diversity of purposes. The methodological controls functioning within the focus groups primarily concerned the sample selection. All group participants were registered dietitians, and practicing in a hospital and assigned to different groups depending on an individual's amount of experience as a clinical dietitian and the highest degree completed. A wealth of detailed information was collected at relatively small cost.

Focus group interview data became the basis for the second part of stage three: questionnaires. A single questionnaire in two formats was developed to determine the extent to which a broad representation of Pennsylvania Dietetic Association members agreed with the focus group results. This involved both pencil-and-paper questionnaires and an electronic preference recording device. These were available in the display area at the Pennsylvania Dietetic Association's (PDA) annual meeting in 1987.

At this point, two factors were important. The next assessment instrument had to determine the validity of the accumulated data and observed relationships or trends and the sample had to represent the total population of practicing clinical dietitians in Pennsylvania. A statewide survey of randomly selected PDA members was designed. From 750 surveys, over 62 percent were returned. The 29 content areas identified during stage three were presented in categories with the opportunity to suggest additional topics. The likelihood of participating in a continuing professional education activity and the preferred depth of content were asked of each content topic. Ten demographic items were included which were tested as predictors of topic preferences and eight additional questions concerned scheduling and program delivery format preferences. The final question invited other comments regarding continuing professional education preferences, needs, and specific interests. Although the data analysis is currently incomplete, the results are encouraging. The final analysis will not only provide marketing strategies, program design guidance, and topical priorities, but it will become the foundation for stage five--the consideration of a lifelong learning curriculum for clinical dietitians.

IMPLICATIONS

Work with clinical psychologists at Penn State parallels stage one and stage three (focus groups only) of the dietetic work while the architecture profession which also began with a practice audit has selected self-assessment instruments as stage two. Again, composite professional profiles are the goal. Throughout the process, professional collaboration on individual, state, and national levels has been encouraged, as a professional's continuing educational activities are part of one's personal professionalization process (Houle, 1981), which synergistically affect the profession and the total membership.

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WEEKEND COLLEGES IN THE UNITED STATES
AN ASSESSMENT

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Abstract

The purpose of this study was to identify the characteristics common to the operation of the "best" weekend colleges in the Nation, Research questions were: Which weekend colleges in public universities are the best in the Nation? What are the characteristics common to the operation of the best weekend colleges in public universities. A total of fifteen recommendations for operation and development of weekend colleges is provided.

INTRODUCTION

An awareness of the need to review and evaluate existing programs has increased in higher education during the past decade. The future of higher education may rest on the ability to evaluate existing programs and meet the needs of the non-traditional students. The weekend college is one of the various ways in which universities are attempting to deal with the declining enrollments. In 1986, the Carnegie Commission stated that "the future of many universities may rest on their ability to reorganize and initiate new education concepts for the non-traditional student." According to Lace (1936), the Newman Report on Higher Education reported that education "... should become a part of all life ... learning is a year-round, lifelong, continuous process." Both reports predicted that by the year 2000, 80 percent of all students in higher education will be non-traditional (Lace, 1986, p. 9).

The need for change in program design has resulted in various techniques of programming to accommodate new types of students. The weekend college has been considered to be one method of providing educational opportunities for students who find it inconvenient or impossible to avail themselves of the traditional day or evening classes (Morton, 1979). When the past growth of all adult education programs and especially the weekend college is extrapolated, there is every reason to believe that the programs will experience even greater growth and refinement (Morton, 1977). Morton indicated that institutions should anticipate such growth and begin planning for it.

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The following trends have been identified in weekend college programs by Cross (1976):

1. The quality of leadership will improve. This will be because the type of leadership needed is becoming better defined in this field and partly because weekend programs are attracting high caliber educators.

2. Opportunities will become increasingly available year round.

3. Opportunities will balance out better geographically and people in less populated regions of the country will have a greater range of choice.

4. Certain types of programs will be modified and enlarged so that not only individuals and couples but also whole families will be able to participate.

5. The greatest growth will be in the 'task oriented' programs. These are the types that are directly related to professional or vocational career objectives.

6. Many of the longer programs requiring residence for periods ranging from three to six weeks will be condensed and people with full-time jobs will be able to accomplish their educational objectives on weekends and holidays and during sessions lasting four or five days.

7. Teaching and administrative staffs will become more professional and specialized.

8. Centers will broaden their curricula, offering courses in more subjective areas in order to make fuller use of facilities, teachers, and service staffs (pp. 165-167).

The data for this study was collected by 321 administrators of weekend colleges included in the Dictionary of Weekend Colleges published by the American Association of State Colleges and Universities. After receiving and analyzing the returned questionnaires, the 20 most frequently identified weekend colleges were to be selected for inclusion in this study. The most frequently identified weekend college received 40 votes. The fifteenth weekend college received ten votes and the tally then dropped to one vote. From this pattern it was decided to limit the population to the institutions among the top 15 vote recipients.

A survey instrument was developed with the help of a panel of experts. The instrument consisted of 29 questions pertaining to characteristics of the operation of weekend colleges and one question pertaining to guidelines for the operation of weekend colleges. The survey forms were sent by first-class mail to each member of the population. The mailing was completed during February, 1987. A cover letter was included in the mailing which explained the survey form and its rationale. Stamped, self-addressed envelopes were provided for the return of the survey forms. Each return envelope was coded in order to identify the responding university. This coding provided for the follow-up of those administrators not responding.

After two weeks, a post card was sent urging those whose survey forms had not been received to lease respond. Administrators who did not respond to the initial request and post card follow-up were contacted once by telephone. Of the questionnaires which were returned, there was an 80% response. The responses of the administrators were summarized, tabulated and coded for statistical analysis.

Major findings of the research include, but are not limited to:

1. The best weekend colleges in the nation are: California State at Chico; California State at Fresno; California State at Long Beach; Central Connecticut State; Southern Illinois at Edwardsville; Indiana/Purdue at Indianapolis; Eastern Michigan; Wayne State in Michigan; Western Michigan; Central Missouri State; Wayne State in Nebraska; Kent State in Ohio; Francis Marion in Southern California; the University of Wisconsin at Oshkosh; and the University of Wisconsin at Stevens Point.

2. The range of enrollment was found to be 5,001 to 10,000 for undergraduates, and the average enrollment was 1,001 to 3,000 for weekend college students.

3. The majority of weekend college programming was offered on a Friday/Saturday/Sunday combination schedule.

4. All of the best weekend colleges offered courses which could apply toward degree programs.

5. Education was the most common major among students pursuing degrees on weekends.

6. The scheduling of courses that met on a Friday/Saturday combination was offered by weekend colleges within both large and small universities.

7. Courses which met on a Friday/Saturday/Sunday combination were offered by both large and small universities.

8. Courses which met on a Friday/Saturday/Sunday combination were offered most frequently by weekend colleges within large universities.

9. All universities in this study offered courses for degree credit through the weekend college.

10. In most cases, the weekend college was administered by continuing education in the larger universities.

11. Weekend college administrators responded to the request for guidelines for the operation of weekend colleges with the following items:

    a. quality instruction at convenient locations
    b. innovative courses
    c. responsiveness to the lifelong learners
    d. support from administration, faculty and students
    e. individualized student services
    f. offering the same courses that are offered during the day
    g. limitations on involvement of continuing education
    h. adequate contact hours
    i. support from academic units
    j. internal and external marketing
    k. duplication of traditional daytime curriculum*
    l. breadth of course offerings*
    m. academic quality and integrity*
    n. course offerings basic to many majors*

A composite picture of the best weekend colleges can be inferred from the tendencies of certain responses. The "typical" best weekend college is under the direct responsibility of the Dean of Continuing Education. It has 1,600 students most of whom are 25-45 years old, a budget of $180,000 and credit hour fees of $56. Most of the faculty are selected by their respective academic departments and one-fourth of the professors are regular faculty teaching within load. Courses are offered for credit toward bachelor's degrees in general studies and in education. Most of the courses are provided in a Friday evening/Saturday/Sunday format. The library, bookstore, and recreational facilities reopen during some of these hours while most other student services are not available.

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A PRACTITIONER'S GUIDE:
CONDUCTING AN EFFECTIVE RETENTION STUDY

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Abstract

The Delaware State College Retention Study is a continuing education initiative funded in October 1986 by the Council for Adult And Experiential Learning (CAEL). The objective of the study is enrollment management through analysis of parttime student retention/attrition rates. Symposium presenters will offer practitioners step-by-step guidelines and strategies for improvement in retention. Other data included are:

1) ready-to-use analysis plans,
2) task checklists,
3) survey methodology,
4) findings,
5) recommedations, and
6) conclusions

Activities of this study will be reviewed through theoretical and practical perspectives.

INTRODUCTION

In order to review the origin and development of the Delaware State College Retention Study, symposium presenters will offer two different perspectives: theoretical and practical. The theoretical perspective will 1) explain the genesis of the study, 2) identify the problems, 3) analyze the project design, and 4) rationalize the reasons why the plan seemingly worked. Primary to the theoretical side will be the presentation of the project plan and study outcomes. The practical side will explain how the "Grand Plan" was carried out. This segment will offer a step-by-step approach, including pitfalls to avoid and useful pointers in replicating the study. Discussion and questions will be encouraged at the conclusion.

BACKGROUND

Theoretical

New students comprise almost one-third of the Continuing Education enrollment each semester; however, proportionately, the increase in students in Continuing Education is not as great from year to year as might be expected. While Evening College enrollment growth has been continual the last decade (1987: 458 students; 1977: 319 students), retention has virtually been ignored, due to the lack of resources.

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Obvious questions arise from these observations:

1. What percentage of new students drop out of Delaware State College Continuing Education each semester?
2. What reasons are behind student attrition?
3. What college strategies might improve retention?

With funding from the Council for Adult and Experiential Learning (CAEL), a two-part study was designed. First, the plan provided for the collection and analysis of computer registration data on Continuing Education students. "Numbers" generated could be expected to provide a fairly accurate description of dropout patterns. Secondly, students who had dropped out were surveyed by telephone and mail to determine reasons for attrition.

Practical

It was decided that new students in the Fall semesters of 1983 and 1984 would be used for the computer analysis. Continuing Education records would be computer-searched to determine percentages of students who, over a two-year period, never returned, returned once, returned twice, or returned three or more times. Race and sex of students would also be reflected in the computer-generated statistics.

In the survey portion of the study, it was decided to use two populations of students. The first group, to be telephone surveyed, had taken Continuing Education classes previously but had not enrolled for two or more semesters. The second group, who would receive mail questionnaires, had not returned within two years.

COMPUTER REGISTRATION STUDY

The computer search component of the Retention Study was implemented as planned. The most salient findings of this research were the following: (1) approximately 50 percent of new students did not return to Continuing Education in the next two years after the initial enrollment and (2) Black males comprised only 6 percent of the student population at the Historically Black College.

TELEPHONE SURVEY

A 23-question survey was developed and two Master-level students were hired to conduct the interviews. Staff members pilot-tested the instrument to determine time length and deliverability. Student-surveyors were briefed on how to conduct the interviews, with special attention given to: history and purpose of the Retention Study, telephone etiquette, and insightful information in student responses.

Significant findings of the 100 telephone interviews included: (1) Student perception of Delaware State College is apparently positive. (Seventy-seven percent rated the quality of education "good" or better. Only four percent rated quality "poor".) (2) Students found fault primarily with the fact courses are often cancelled or are not offered when they needed them. (Nineteen percent stated "course selection" is the worse aspect of Continuing Education.)

MAIL SURVEY

A 16-item questionnaire was developed, keeping in focus the goals of the study: to determine **why** students dropped out and **what** Continuing Education might be able to do to encourage them to return. The questionnaire was pilot-tested by a sample of 20 former students.

Two hundred names were chosen randomly from a list of 1983-84 students who had not returned for two years or more. Packets which included an introductory letter, the survey form, and a self-addressed, stamped envelope were mailed. A total of 414 surveys were mailed and 67 were returned for a response rate of 16 percent.

There were several findings of particular interest in the mail survey: Only 27 percent of dropouts indicated they had been assigned an academic advisor; only 48 percent had declared an academic major. Also, a total of 36 percent of student dropouts had only attended one semester in Continuing Education.

A step-by-step checklist will be provided symposium participants for replication. Pitfalls of this study include the following: (1) drop-out students may be difficult to locate, (2) the study takes considerable time and energy to conduct, and (3) registration data must be available in order to implement the study.

SUMMARY OF FINDINGS

Students who enroll in Continuing Education are most likely to be either beginning students or students who have had considerable college experience. Twenty percent of Continuing Education students interviewed had taken less than 15 credit hours of college work; forty-eight percent had 120+ hours. Twenty-seven percent of students attended DelState Continuing Education only one semester, while ten percent had attended six semesters or more.

Student perception of Delaware State Continuing Education is apparently positive. Seventy-seven percent rated the quality of education "good" or better. Only four percent rated quality "poor." Students found fault primarily with the fact courses were often cancelled or were not offered when they needed them. Nineteen percent stated "course selection" was the worst aspect of DelState Continuing Education.

RECOMMENDATIONS

1. More effort should be made to recruit Black males into DelState Continuing Education.

2. Continuing Education students should be assigned academic advisors. Advisement obviously is a great need of Continuing Education students and may increase retention.

3. Continuing Education students should be encouraged to declare a major field of study. Less than 37% of Continuing Education students in the Retention Study had declared majors. According to studies, "undecided" students are "drop-out prone."

4. Continuing Education should promote communication between academic department heads and student clientele. Students also commented on a lack of communication between Continuing Education and the Evening College student.

5. Continuing Education should maintain annual student retention records to monitor the dropout rate of students (especially "at-risk" students).

6. Continuing Education should promote, whenever possible, the feeling of belongingness among Evening College students. Student support groups should be encouraged and promoted.

CONCLUSIONS

Reasons for student attrition appear to be numerous and varied. One important reason may be that students simply do not feel they are a part of the DelState family or of any specific department or organization. Continuing Education students, as commuters, are not involved with DelState activities to the same degree as "day" students. Students often are not familiar with the Campus and the variety of activities and services offered. This fact is highlighted by the numbers of students who do not declare majors and do not seek academic counseling. Seemingly, Continuing Education students need to feel like they "belong." Chickering (Cross, 1982, p. 244) mentions the fact that "full-time resident college students gain more from their college experience than part-time commuting students." This is a tendency Continuing Education must counteract, if attrition is to be reduced.

The experience of Marist College needs replication. This New York College increased retention from 59.3 percent to 92 percent, largely due to a "comprehensive program for commuters... One important part of this program is the Mentor Program; others include a computerized early warning survey, learning skills workshops, an orientation program and a student group called the Commuter Union" (Noel, Levitz, et al, 1985, p. 179).

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EDUCATIONAL SERVICES TO ISOLATED LOCATIONS USING STATE OF THE ART TECHNOLOGY

Joseph D. Smith [1]
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Abstract

Current technology allows for the extensive use of existing hardware for professional development programs at isolated locations. The development of software required to provide meaningful instruction such as fully transferable college undergraduate course content has been slow and expensive. The advantage of being able to provide high quality professional development using available hardware systems can be demonstrated. The Navy is currently providing sailors with the opportunity to take fully accredited college courses using available videotape, video disc, and microprocessor equipment.

INTRODUCTION

The Navy is concerned with the intellectual development of enlisted personnel stationed on board Navy ships. Smith and Moracco (1984) describe the Navy's concern for the development and dissemination of cost effective voluntary educational opportunities for Navy personnel. Smith (1984) reports on the success of a pilot project undertaken by the Navy to determine the potential of college instruction using the videotape, video disc, and the microcomputer technology. This paper will review the progress of further implementation of professional development activities using the videotape, video disc, and microcomputer.

The original project reported by Smith (1984) has been broadened to encompass more than 25 submarines and surface ships. The course offerings have expanded from three to 30, and the number of sailors enrolled currently exceeds 1,000. Some fresh conclusions appear to be in order with respect to the practicality and effectiveness of this delivery system for professional development.

ON-SHIP DELIVERY OF EDUCATION

The Navy fleet consists of 600 ships ranging in size from small patrol craft and seagoing tugs with crews of 10-20 sailors to modern nuclear aircraft carriers each with a complement of more than 6,000. Today's sailor is educationally inclined and the Navy makes determined efforts to deliver educational opportunities for the individual aboard ship. The Navy has accepted the challenge of providing quality education for its sailors. Its successes to date have been noteworthy.

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Since 1961, the Navy has sponsored the Program for Afloat College Education (PACE) to provide college level instruction to Navy sailors at sea. The traditional PACE program is based on negotiating competitive contracts with accredited colleges and universities to deliver traditional classroom instruction. Normally, a civilian instructor serves as a "ship rider" to teach sailors. The contractual requirement is to have a minimum of 10 sailors per class. Although instructor-driven teaching has been highly successful, there are clear limits to what this delivery system can do. With a minimum of 10 sailors per class, course delivery is restricted to lower division undergraduate "survey type" courses. Small ships are excluded due to the 10-sailor-per-course requirement and lack of space to house instructors. A third limitation is that classroom instruction relies upon students being available at the same time during the day and/or night. These limitations are also present in the continuing professional development of learners in other settings.

VIDECTAPE, VIDEO DISC, AND MICROPROCESSOR PROJECT HARDWARE AND SOFTWARE

Marrying the video and microcomputer technology has provided the mechanism for independent, fully transferable college credit courses aboard ships. The equipment used is an IBM-PC with keyboard, a color monitor, a 1/2" Beta VCR, a dot matrix printer, a laser disc player, and an audio player--all carefully integrated into an effective system. The equipment is housed in a portable carrel, which can be locked, for convenience and security. Middlesex Research Center (MRC), in Arlington, Virginia, an educational and consulting firm, supplies and integrates the hardware and software for the project.

The software used consists of course and lesson content developed by the academic sponsor, the George Washington University. This information is stored on the computer hard disc and is used to pace the student through the course. Course materials include standard texts and study guides together with video and computer-generated lesson content along with student workbooks developed for each course by a university faculty person. Each workbook links together all instructional material for a course.

The third party in the educational delivery contract is Scott, Foresman and Company, the educational publisher, which provides its educational expertise to the project including selection and development of print materials, especially with regard to student interests and concerns. It also assists in developing promotional information for potential student-sailors.

A panel of distinguished educators and specialists in instructor-free interactive teaching has been assembled as members of an advisory committee to provide quality control and a running critique of the project as it develops and to make appropriate recommendations.

As noted earlier, three modes of delivery are being employed: computer-managed video, video disc, and computer-assisted instruction. All three modes offer full academic credit.

COLLEGE COURSES AVAILABLE

To date, more than 1,000 sailors have taken one or more of the 30 courses in 11 disciplines available using the specified hardware. Perhaps the most attractive courseware thus far has been computer-adaptation courses developed by the Annenberg/Public Broadcasting Project. Completion of course rates for individual ships and courses vary, but exceeds the 60% completion rate reported by Smith (1984) for the original (pilot) project. The 24-hour-a-day availability of the material coupled with the removal of the restriction on a minimum number of students makes the delivery attractive for small ships as well as permitting the expansion of course offerings. As matters stand, the limited number of existing course software currently available and the substantial expense of developing new instructional materials appear to be the sole major deficiencies of this operative system.

FINDINGS ON PROGRAM EXPANSION

In the initial pilot project described by Smith (1984), the use of the hardware on deployed submarines proved efficient and effective. The expansion of the system to surface ships was considered risky. The deployed submarine offers a captivating environment with little or no external communication during deployment. Surface ships tend to remain in communication with the shore and with each other and frequently make port calls which can be potentially distracting. The submarine sailor is generally thought to be, on average, intellectually superior to the surface ship sailor. Neither a potentially distractive environment nor the alleged intellectual superiority said to set the submariner apart, have affected results to date in the current demonstration project. Both the subsurface and surface sailors are, by and large, completing their coursework and succeeding in their studies with very similar performances being recorded.

In the pilot project no mechanical breakdown in the equipment was noted. In the ongoing much larger project, to date there have been few equipment failures which could not be easily dealt with onboard. When dealing with deployed ships, equipment failure could be devastating to the program. It has come as a pleasant surprise to more than a few doubters that the claims of the hardware suppliers about the effectiveness and durability of their equipment have been borne out. For surface ships, operating in an often hot, humid, salt water environment, equipment performance continues to be a source of amazement and relief.

IMPLICATIONS FOR PROFESSIONAL DEVELOPMENT

Judging by the much-expanded project now under way, and based on initial results, employing computer-managed interactive video for professional development appears to be a "natural." Since 1961, the Navy has incurred considerable costs to provide live instruction onboard ships in spite of the marked constraint of requiring a minimum number of participants in each course. Professional development is also costly when undertaken in a group setting. The requirement that each participant have approximately the same intellectual and informational needs and abilities likewise pertains in group college course and professional development delivery. The application computer-managed interactive technology and software geared to overcome these obstacles is in the process of proving itself.

The expense of developing new, high quality materials is substantial. This expense can be successfully reduced by employing already existing courseware that measures up to quality requirements. In addition, the adaptation of other previously developed courseware as well as weaving together instructional materials from multiple sources can be an effective measure. Obviously, with the expansion of student enrollment, as is currently taking place, this delivery system and course development geared to its end become increasingly cost effective. A note of caution: Claims about software effectiveness frequently fall short of reality. Care should be exercised to ensure that the depth portrayed by the vendor is adequate for the end user. In addition, it is essential that all materials being considered for procurement be reviewed. For example, while many demonstration video discs exist, not a single complete program is presently available, although a few are under development.

Despite these caveats, the prospect of being able to deliver professional development instruction around the clock to individuals in isolated locations could, as is being demonstrated in the current Navy project, turn out to be an educational breakthrough of historic proportions.

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DEVELOPMENT OF A NATIONAL MANPOWER PLAN FOR THE MALAWI MINISTRY OF AGRICULTURE

Thomas F. Trail(1)

Abstract

A National Manpower Plan for the Malawi Ministry of Agriculture was carried out in 1987. The plan was developed for more than 9,000 employees. The purpose of the study was two-fold: 1) to develop a plan that would meet the requirements of the Ministry and donors and serve as the basis for a five-year training plan, and 2) to identify a human resource development or training model that would allow for meaningful input and participation by first line supervisors and above. The model which provided the framework for the study was that of L. Nadler. A total of 175 supervisors were involved in the study.

INTRODUCTION

Background Of The Study

Malawi is a small, landlocked, agrarian country located in east, Central Africa. Ninety percent of the population are engaged in subsistence and some cash crop farming. Government policy has supported agricultural development. In the early 1980's Malawi reached a stage of self sufficiency and even exported surplus maize to neighboring countries.

In 1986 Malawi initiated National Rural Development Program V (NRDP V). This was the fifth in a series of five-year national development plans to strengthen the rural sector of the country. The World Bank and the United States Agency for International Development (USAID) financed the major portion of the $14,000,000 effort. The Ministry of Agriculture (MOA) was charged with the responsibility for providing the leadership for the program.

The MOA is made up of three major divisions--extension, research, and veterinary medicine. There are eight regional subdivisions called Agricultural Development Districts (ADDs). Authority is decentralized at the ADD level. All agricultural services are available at the ADD level.

One of the requirements of NRDP V was to develop a National Manpower Plan for the MOA. This was a requirement of the donor agencies--World Bank and USAID. The Training Unit (TU) at headquarters was given the responsibility to develop the plan. A major constraint was time. The plan was to be approved and aoperational by August 1987.

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The major objectives of the plan were to identify manpower needs over the five year period, assist the MOA in detailing future staff requirements, and develop short and long term training plans.

METHODOLOGY

Introduction

A partial manpower development study had been conducted by Ian Macdonald and Associates in 1985. This study was very general in nature, but did provide some specific job categories and task definition.

The approach taken by the TU was to design and conduct a well planned needs assessment. In terms of job skills and performance the TU defined that the assessment was an effort to reveal the gaps between what people do at work and what their employers would like them to do.

Selection Of An Overall Approach

The Training Unit (TU) needed to: 1) identify an overall model which could not only be utilized in the development of the Plan, but also serve as a framework for all steps involved in the training cycle, and, 2) develop techniques to maximize managerial input into the development of the plan.

After reviewing a number of models, it was decided to select that developed by L. Nadler. Nadler (1970) describes training as a process which is job oriented and can be analyzed and developed through a deductive approach; that is, the use of an orderly process which involves the following steps: 1) develop job standards; 2) identify needs; 3) determine objectives; 4) develop curriculum; 5) select methods and materials; 6) obtain instructional resources; 7) conduct training, and 8) evaluation and feedback.

These are not discrete steps and cannot be followed in rigid order but require a great degree of interaction and recycling. For the purpose of developing the Plan the first two steps in Nadler's model provided the initial impetus for the study. The other steps were incorporated into the overall training of managers, trainers, and staff, once needs were clearly identified.

Job Standards

The training process begins with the development of job standards. Managers and training directors must know the job description, job analysis, statement of tasks, etc. if an organization undertakes to give some meaning to what is to be accomplished by any individual.

Within the Government of Malawi (GOM) and the MOA there are generic job descriptions for all positions. However, it was readily apparent that most job descriptions did not adequately reflect what the employee was actually doing nor what the line supervisor expected the individual to accomplish. A total of 175 line managers were given training in up-dating job descriptions.

Generally, all individuals can be expected to have some training needs. The MDA, like many organizations, has changed in procedures, emerging new technologies, and personnel constantly changing positions. The two broad areas the MDA has to deal with are the demand of the job (job standards) and what the individual brings with him to meet the job standards. The training needs of an individual can be seen as:

JOB STANDARDS-

WHAT EMPLOYEE KNOWS, DOES OR THINKS = TRAINING NEEDS

Up-dated job descriptions were developed for staff, and then needs identified. A set of instructions were sent to 175 line managers asking them to look at job standards and current performance of personnel and to identify the "training gaps" or needs for staff. Needs were identified for both short (one year) and long term (five) year parameters. Managers were asked to involve as many staff as possible in the assessment.

Managers listed specific types of needs in terms of tasks under both short- and long-term requirements. They then assigned a degree of criticality (importance) to each need. Each manager then developed a final statement in terms of the criticality of needs relating to goals of their Department and NRDP V.

During 1987, followup interviews were held with 65 managers and 70 staff who participated in the activity. The specific point of interest was the degree of perceived involvement of managers and staff.

RESULT

The major product was the development of a 5-year manpower development plan for the MDA. This plan is now being utilized by all units in the MDA. The Nadler model was judged by 95% of the 65 managers interviewed to be an efficient and flexible approach for developing job standards and identifying needs. The remainder of the steps in the Nadler model have been incorporated into the nationwide Training of Trainers program, and other training activities of the MDA. By the end of project it is anticipated that 100 trainers, including managers, will be trained in the use of this approach.

The modified model was judged to be partially successful with respect to participation of employees in the process. A major constraint limiting participation was the six months deadline to finalize the plan. A total of 87% of the 65 managers interviewed reported a high degree of participation of staff in up-grading job descriptions and assessing needs. Conversely, only 15% of staff indicated in high degree of involvement. A total of 45% reported a moderate degree of participation, and 40% indicated a low degree of participation in the process.

CONCLUSIONS

The modified Nadler model appears to allow for participant input in developing a national manpower development plan under severe time constraints. Developing job standards and identifying training needs for the plan were the primary focus of the exercise. Both MOA managers and donor representatives expressed satisfaction with the process. Staff generally indicated a low to moderate degree of involvement.

IMPLICATIONS

Practioners strive to obtain participant input in program development activities at all levels in developing countries. The approach used in Malawi to develop a national manpower development plan offers useful guidelines to program developers. New means of involving staff in the development of the plan will enhance their ownership in successfully carrying out the short and long term objectives and activities of the plan.

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THE METAMORPHOSES OF ADULT LEARNERS: CHANGES AND ADAPTATIONS OF LEARNING PREFERENCES

Dennis E. Campbell[1]

Abstract

This paper summarizes results of research to determine if learners change their preferences for learning when teaching approaches may or may not match their preferences. The study involved the Myers-Briggs Type Indicator (MBTI) and a survey of learning methods, techniques and devices (MTDs) in a pre- and posttest analysis of adult learners in a 15 month education program. A strong preference for some form of discussion was evident in the posttest MTD rankings. A dislike for memorization, term papers and lecture persisted in the pre- and posttest rankings. Likes and dislikes were related to various MBTI dimensions. Change in one or more MBTI dimensions occurred for 63% of the learners. The greatest change occurred in the dimensions of judgment or decision making, perception, and orientation to generating information and ideas. Nearly 60% perceived some form of learning preference change at the end of their program. Of those who reported a change in learning preferences, 74% changed an MBTI dimension. There was no MBTI change among 53% of those who had not considered or were unaware their learning preference did or could have changed. Of those who reported no change in learning preferences, 50% did not change an MBTI dimension.

INTRODUCTION

Purpose of Study

Learners come to educational encounters with varied preferences and approaches toward learning. A major task facing the educator involves determining and matching those preferences and approaches. This paper is a report on an investigation into determining changes and adaptations adult learners make when faced with learning situations counter to their preferred approaches.

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Sample Description

The sample consisted of adult learners attending a 15 month master of science degree program at the Air Force Institute of Technology. One hundred twenty two subjects participated in the pretest; one hundred six participated in the posttest. There were 17 females who participated in the study. The majority of the subjects were military officers with the rank of Lieutenant, Captain or Major. Civilian-status learners held comparable grades. The age of the learners ranged from 24 to 40 years; the average was 30.5 years.

Research Design

The basic design for the study was a One-group Pretest-Posttest Design. The MBTI Form G and a questionnaire about learning methods, techniques and devices (MTDs) were administered at the beginning and ending of the 15 month program. Statistical tests for significance were performed using Statistical Package for the Social Sciences (SPSSx). Significance of .05 and greater are reported.

DATA ANALYSIS

Preferences for Learning Methods, Techniques and Devices (MTDs)

Selections of most and least preferred MTDs were made from 33 choices. Figure 1 is the ranking of the five most preferred and least preferred MTDs recorded by the sample. Rankings made in the opposite test are shown in parentheses. The rankings were determined as significant beyond the $p < .05$ level. Discussion and Confer with Students were ranked among the top five in the pre- and posttest rankings. Other MTDs show distinct changes in the pre- and posttest rankings. Four of the five posttest most preferred MTD rankings involve some form of discussion -- group, student, instructor, and case study which is likely to include oral discussion. The ranking of lecture as a pretest most preferred and posttest least preferred MTD raises questions of frequency and quality of use. The basis for this ranking is evidenced later in this paper. Pre- and posttest least preferred MTD rankings included memorization and term papers.

Figure 2 is the top three most and least pre- and posttest ranking of MTDs by MBTI temperament groupings. The arrays show preference of learners with different levels or degrees of perception and judgment. The rankings evidence preference change among the various groupings. Further, they provide reason for employing specific MTDs in teaching/learning repertoires.

Perceived Change of Learning Preferences

Seventy three subjects responded to questions of whether or not they perceived change in their learning preferences between the beginning and ending of the 15 month program. The subjects were not asked if they thought their MBTI designations changed. Figure 3 shows the responses grouped into three categories: Unaware that change could or may have occurred; change not perceived; and change perceived. For this study, change was defined as recording a different MBTI letter designator during the posttest. This form of change identifies only the **direction** of change, not the strength of change.

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Sixty three percent of the sample recorded an MBTI letter change. Of those unaware of change, a marginal percentage did not actually change in MBTI letter designation. No marginal difference is noted for those perceiving change not occurring. Nearly three-quarters of those who perceived change actually changed an MBTI letter designation.

Figure 1: FIVE MOST AND LEAST PREFERRED LEARNING METHODS, TECHNIQUES AND DEVICES RANKINGS

Rank	MOST PREFERRED PRETEST	Rank	MOST PREFERRED POSTTEST
1.	Demonstration (9)	1.	Group Discussion (3)
2.	Lecture (7)	2.	Confer w/ Students (4)
3.	Group Discussion (1)	3.	Guest Lecture/Speaker (10)
4.	Confer w/ Students (2)	4.	Discuss w/ Instructor (7)
5.	Homework Assignments (8)	5.	Case Study (14)

Rank	LEAST PREFERRED PRETEST	Rank	LEAST PREFERRED POSTTEST
1.	Memorization (1)	1.	Memorization (1)
2.	Pop Quiz (10)	2.	Examination (8)
3.	Term Papers (4)	3.	Lecture (13)
4.	Role Play (16)	4.	Term Papers (3)
5.	Group Projects (6)	5.	Drill & Practice (12)

Note: Opposite test ranking shown in parentheses.

Figure 2. THREE MOST AND LEAST PREFERRED LEARNING METHODS, TECHNIQUES AND DEVICES RANKINGS BY MBTI TEMPERAMENT

	MBTI Temperament Group Pretest / Posttest Ranking			
Most Preferred MTD	**ST**	**SF**	**NF**	**NT**
Group Discussion	-/2	1*/1	-/2	1/1
Confer w/Students	-/3	----	1/1	2/2
Guest Lecturer/Speaker	----	1*/2	-/3	-/3
Discuss w/Instructor	3/1	1*/3	----	----
Homework Assignments	1*/-	----	2*/-	3*/1
Lecture	1*/-	1*/-	----	
Demonstration	----	----	2*/-	3*/-
Least Preferred MTD	**ST**	**SF**	**NF**	**NT**
Memorization	-/1	3/3	1/3	1/1
Examination	-/2	-/1	2*/1	----
Lecture	----	-/2	-/2	3*/2
Term Papers	1/3	1*/-	----	----
Drill & Repetition	----	----	----	-/3
Pop Quiz	----	1*/-	----	2/-
Role Play	2/-	----	2*/-	----
Peer Teaching	3/-	----	----	----
Group Projects	----	----	----	3*/-

Note: (*) = Tie in ranking
(-) = Not among top three rankings in observation.

Figure 3 includes the direction of change for each dimension of the four MBTI sub-scale measurements. The strongest degree of change (53%) occurred in movement from subjective to objective judgment or decision making. The strength of that change is amplified in the change from the perceptual to judgment function (38%) in one's life-style and outer world. It is reasonable to expect movement from subjective to objective decision making and more development in the judgment function to occur as a result of the educational programs. It is equally reasonable to expect the relatively minor amount of change (20% or less) noticed in the other dimensions.

Figure 3. PERCEPTION OF LEARNING PREFERENCE CHANGE AND CHANGE OCCURRING BY MBTI CATEGORIES

	UNAWARE OF CHANGE	CHANGE NOT PERCEIVED	CHANGE PERCEIVED	TOTAL
Response Group n	15 (20.5%)	16 (21.9%)	42 (57.5%)	73
No MBTI Letter Change	8 (53%)	8 (50%)	11 (26%)	27 (37%)
MBTI Letter Change	7 (47%)	8 (50%)	31 (74%)	46 (63%)
Direction of MBTI Change				
Generating Information and Ideas:				
From E to I	0 of 2	2 of 8	3 of 16	5 of 26
From I to E	2 of 13	1 of 8	6 of 26	9 of 47
Perceptual Function:				
From S to N	1 of 11	0 of 11	4 of 21	5 of 43
From N to S	0 of 4	2 of 5	4 of 21	6 of 30
Judgment of Decision Making Function:				
From T to F	0 of 10	0 of 13	3 of 31	3 of 54
From F to T	3 of 5	2 of 3	5 of 11	10 of 19
Life-style and Function used in Outer World:				
From J to P	0 of 12	1 of 16	1 of 29	2 of 57
From P to J	1 of 3	0 of 0	5 of 13	6 of 16

Legend: E: Generating Info/Ideas through Extraversion.
I: Generating Info/Ideas through Introversion.
S: Perceiving through Sensory dimension.
N: Perceiving through Intuitive dimension.
T: Judging through objectivity.
F: Judging through subjectivity.
J: Using judgment function (T or F) to rule life.
P: Using perception function (S or N) to rule life.

CONCLUSIONS AND IMPLICATIONS FOR ADULT LEARNING

Change is evident among this sample. Pre- and posttest rankings of MTDs differ. The differences indicate change may likely occur as a function and dysfunction of the learning process and environment. Further, specific MTDs were shown to be related to certain MBTI dimensions. This relationship may be useful in designing and conducting learning situations. The more similar the MTDs and MBTI category, the more likely effective learning may occur. Likewise, when learners encounter non-preferred ways of learning, the need for coaching and stretching is highlighted.

In this study, nearly 80% of the learners reported that they were aware whether or not change in their preferred learning approaches occurred. Of the 57.5% who perceived some change, nearly 75% changed a dimension as measured by the MBTI. It would seem that adult learners are in contact with the dynamics of learning when faced with non-preferred circumstances. However, the 21.9% who perceived no change had occurred were not as convincing. Half changed a dimension; half did not. The confidence in the resistance to change is suspect. Among the 20.5% who reported they were unaware of the possibilities change could have occurred, 53% changed an MBTI dimension. Some relevance here is that graduate students do not consider the idea of changing a learning preference as possible or important. The question of what change might have occurred if disclosure of learning preferences were made also seems relevant.

Among those MBTI dimensions evidencing change, the most frequent occurred in the movement from subjective to objective judgment or decision making (From F to T). Learners took on the processes of decision by rules, laws, procedures and impersonal analyses. The next most noticeable movement was seen in assimilating the judgment function as a major force in their lives (From P to J). That is, rather than developing perception, the learners sharpened their skills in decision making. It is reasonable to expect these movements as a function of exposure to the learning environment.

The dynamics of learning environments have profound affects upon learners. The results of this study indicate that learner judgment, perception and orientation toward information, ideas, and the outer world are subject to change. The results also support the notion that most learners are aware whether or not change occurs in their preferred learning approaches. The rankings of learning methods, techniques and devices support the concept of designing the learning environment to match specific learning preferences. The rankings also alert educators and learners of the need to stretch and accommodate when preferences are not or can not be met.

Other research has shown the MBTI to be a powerful assessment tool having a wide range of application in education. This research emphasizes the utility of the MBTI in determining adult learning style preferences and changes among those preferences as the adult proceeds through a learning program. Aside from applicability of the MBTI for assessing adult learning preferences, this study suggests six important considerations for the concept of adult learning. First, for the adult learner, change occurs. Change seems likely in learner personality, cognitive strategy, learning approaches, and preferences for certain methods, techniques and devices. Second, though change occurs, teaching and learning strategies should be varied to meet as many preferences as possible. Third, because some learners do not think about ways to learn, learning effectiveness for these learners may be improved if preferences and non-preferences were known. Fourth, some learners -- perhaps the seasoned learners -- are aware of changes and adaptations occurring among their preferences. Fifth is that the direction of change seems related to the goals and objectives of the education program. Change toward objective decision making -- an objective of the program -- was evident in this study. Sixth and last is the question of strength and persistence of change. After leaving the program, how long will the changes remain in effect? Were the changes a form of coping or temporary adjustment, or are they more persistent?

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USE OF THE KAI IN TIMES OF PROGRAM (AND ORGANIZATIONAL) CHANGE

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Abstract

The Kirton Adaption Innovation Inventory was completed by participants of the National Extension Staff Development Conference, 7/87. The KAI theory posits that individuals exhibit characteristic styles related to creativity, problem solving, and decision making. This paper summarizes the SD group results and compares them with normative scores. Some implications are also suggested.

ADAPTION INNOVATION THEORY

In 1961, Kirton carried out a study of management initiative to investigate the ways in which ideas leading to radical change in companies were developed and implemented. While all individuals involved in the study could be called successful managers, Kirton observed differences in the ways that initiatives were implemented. One clear indicator which emerged was that the *personalities* of individuals involved were having an influence on the progress of the initiative through various stages from perception of a problem through implementation. Conclusions resulting from this study were the basis from which the A-I theory emerged.

The Adaption Innovation Theory (Kirton, 1976) defines and measures two styles of decision making. It assumes that individuals exhibit a characteristic *style* relative to creativity, problem solving and decision making. The **two styles, adaption** and **innovation**, are posited to be located in their extreme forms at either end of a single continuum on which any individual can be positioned. The theory is concerned with identification of **style** of behavior, **not level** of creativity or ability. **Style**, irrespective of the level of operation or its context, should still be detectable (Kirton, 1981). Therefore, this theory helps clarify earlier work on problem-solving and creativity which concentrated more on defining and assessing *level* rather than *style*. Measures of *level* are much criticized in terms of their reliability and validity, and are contaminated by such factors as intelligence, know-how and scope of individual action.

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The theory has been widely tested and validated around the world in various settings. Early work focused on corporate managers. More recently, leaders in education have been involved. This researcher has studied several group s within the Extension segment of higher education.

Adaptors characteristically produce lots of ideas, based closely on, but stretching, existing agreed upon definitions of the problem and likely solutions. They look at these in detail and proceed within the established mores (theories, policies, practices) of their organizations. Much of their effort in change is in improving and "doing things better" (Kirton, 1984).

Innovators are more likely, in the pursuit of change, to reconstruct the problem, separating it from its enclosure of accepted customary viewpoints and models, and emerge with much less expected, and probably less acceptable solutions. They are less concerned with "doing things better" than with "doing things differently" (Kirton, 1984).

Testing and Developing the Theory

The Kirton Adaption-Innovation (KAI) Inventory (1977) was constructed to test and develop the theory. The first assumption, that of adaptors and innovators being evenly distributed across population groups, was sustained through use of the KAI with large samples of the general population.

Further, the theory was not thought to be culture specific. Early KAI field work in Britain, Canada, the United States, New Zealand and the Far East (Keller & Holland, 1978, Kirton, 1978,1980, Thomson, 1980 and Torrence, 1980) produced remarkably similar means. However, more recent work with samples of Middle Eastern managers yielded lower means than similar samples from the U.K., the U.S., Canada and Singapore.

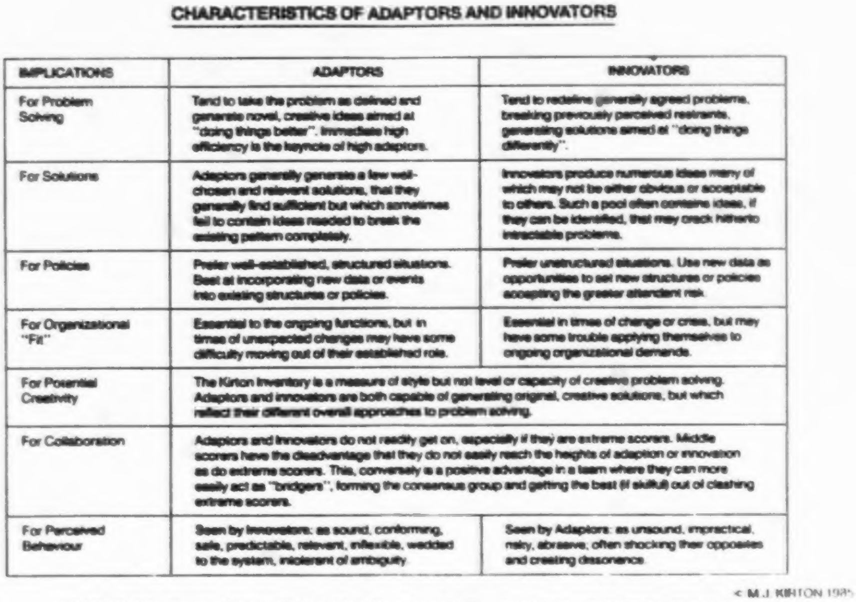
Differences in Organizations and Work Groups

A number of researchers (Bakke, Swatez, Mulkey) have reported that organizations in general, and especially large ones, have a tendency to encourage bureaucracy and **adaption** in order to minimize risk. Weber, Merton and Parsons have said that the aims of a bureaucratic structure are precision, reliability and efficiency and that the bureaucratic structure exerts constant pressure on officials to be methodical, prudent and disciplined, and to attain an unusual degree of conformity. Many of these qualities are attributed to the adaptor personality, according to A-I theory.

Adaptors, when confronted with a problem, do not question the context in which the problem is embedded (or from which it emanates). Rather, adaptors seek solutions within the existing structure, in ways that are "tried and true" with little risk associated. Adaptors can be relied upon to carry out thorough, disciplined searches for ways to eliminate problems by doing things better, with a maximum of continuity and stability. Innovators produce solutions that appear more risky, less sound, that may involve more ripple-effect changes, and that are not easy to conceive precisely. This predictive uncertainty is especially unsettling to adaptors who usually do not want to "rock the boat". The strong innovator may appear less respectful of the views of others, more abrasive in the presentation of solutions, and more at home in a turbulent environment (Kirton, 1984).

Implications for particular tasks in relation to the characteristics of adaptors and innovators are outlined in the chart below.

Figure 1.



CHARACTERISTICS OF ADAPTORS AND INNOVATORS

IMPLICATIONS	ADAPTORS	INNOVATORS
For Problem Solving	Tend to take the problem as defined and generate novel, creative ideas aimed at "doing things better". Immediate high efficiency is the keynote of high adaptors.	Tend to redefine generally agreed problems, breaking previously perceived restraints, generating solutions aimed at "doing things differently".
For Solutions	Adaptors generally generate a few well-chosen and relevant solutions, that they generally find sufficient but which sometimes fail to contain ideas needed to break the existing pattern completely.	Innovators produce numerous ideas many of which may not be either obvious or acceptable to others. Such a pool often contains ideas, if they can be identified, that may crack hitherto intractable problems.
For Policies	Prefer well-established, structured situations. Best at incorporating new data or events into existing structures or policies.	Prefer unstructured situations. Use new data as opportunities to set new structures or policies accepting the greater attendant risk.
For Organizational "Fit"	Essential to the ongoing functions, but in times of unexpected changes may have some difficulty moving out of their established role.	Essential in times of change or crisis, but may have some trouble applying themselves to ongoing organizational demands.
For Potential Creativity	The Kirton Inventory is a measure of style but not level or capacity of creative problem solving. Adaptors and innovators are both capable of generating original, creative solutions, but which reflect their different overall approaches to problem solving.	
For Collaboration	Adaptors and Innovators do not readily get on, especially if they are extreme scorers. Middle scorers have the disadvantage that they do not easily reach the heights of adaption or innovation as do extreme scorers. This, conversely is a positive advantage in a team where they can more easily act as "bridgers", forming the consensus group and getting the best (if skilful) out of clashing extreme scorers.	
For Perceived Behaviour	Seen by Innovators: as sound, conforming, safe, predictable, relevant, inflexible, wedded to the system, intolerant of ambiguity.	Seen by Adaptors: as unsound, impractical, risky, abrasive; often shocking their opposites and creating dissonance.

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EXTENSION STAFF DEVELOPMENT CONFERENCE PARTICIPANTS

Participants in the National Extension Staff Development Conference held in July 1987, were given the opportunity to complete the Kirton Adaption-Innovation Inventory. Prior to the conference, copies of the 33 item self instructional inventory were distributed to key contacts in states. Copies were also available at the conference registration table.

Research Question and Objectives

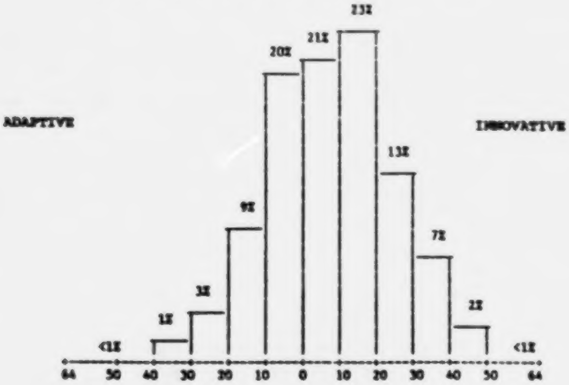
The primary research question was, "Does a group representative of professionals in Extension staff development leadership roles differ from the normal population in leadership roles" in normative Adaption and Innovation scores and in distribution?

Objectives for using the Kirton Adaption Innovation Inventory were to compare scores of this group with normative KAI scores to determine differences; to provide individual feedback to participants; to report group findings (done at general session last day of conference); and to introduce/discuss the inventory as a possible tool for use in home states of the group.

Results

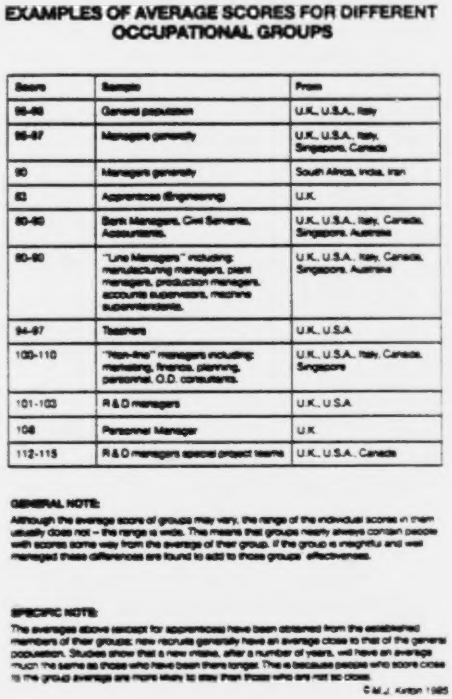
Sixty-nine or 73% of the participants completed the inventory. On a continuum where adaptiveness resides at one extreme and innovation at the other extreme and the center is zero, about one third of the normal population is adaptive. Twenty-nine percent of the staff development group was adaptive, with 71% yielding scores placing them within the innovative group. Scores were skewed to extreme innovation with 34% scoring 125 or above out of a possible 160 (see Figure 2). Scores ranged from 71 to 136 with a mean of 105.9 placing this group in line with scores for Personnel Managers and R and D Managers (see Figure 3). This mean was slightly higher than with two other groups of Extension personnel inventoried in earlier research where those means were 99.2 for a group of new agents and 101.3 for a group of Extension faculty. Scores of the Staff Development group in the extreme adaptive group matched the normal population. The configuration of scores within the mid range of the continuum differed only slightly from the normal population scores.

Figure 2.
Comparison of Normative and Extension Scores



N = 69
Typed percentages = Normative Scores
Handwritten percentages = Extension Staff Development Professionals

Figure 3.



EXAMPLES OF AVERAGE SCORES FOR DIFFERENT OCCUPATIONAL GROUPS

Score	Sample	From
95-98	General population	U.K., U.S.A., Italy
96-97	Managers generally	U.K., U.S.A., Italy, Singapore, Canada
90	Managers generally	South Africa, India, Iran
83	Apprentices (Engineering)	U.K.
80-90	Bank Managers, Civil Servants, Accountants.	U.K., U.S.A., Italy, Canada, Singapore, Australia
80-90	"Line Managers" including: manufacturing managers, plant managers, production managers, accounts supervisors, machine superintendents.	U.K., U.S.A., Italy, Canada, Singapore, Australia
94-97	Teachers	U.K., U.S.A.
100-110	"Non-line" managers including: marketing, finance, planning, personnel, O.D. consultants.	U.K., U.S.A., Italy, Canada, Singapore
101-103	R & D managers	U.K., U.S.A.
106	Personnel Manager	U.K.
112-115	R & D managers special project teams	U.K., U.S.A., Canada

GENERAL NOTE:

Although the average score of groups may vary, the range of the individual scores in them usually does not – the range is wide. This means that groups nearly always contain people with scores some way from the average of their group. If the group is insightful and well managed these differences are found to add to those groups' effectiveness.

SPECIFIC NOTE:

The averages above (except for apprentices) have been obtained from the established members of their groups; new recruits generally have an average close to that of the general population. Studies show that a new intake, after a number of years, will have an average much the same as those who have been there longer. This is because people who score close to the group average are more likely to stay than those who are not so close.

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Conclusions

It can be concluded that the group of Extension Staff Development professionals participating in the 1987 national conference who completed the KAI are somewhat more innovative in style than the normal population. This may not be true for the total group since completion of the inventory was a self selection process and Kirton has reported that self selectors score significantly higher on the KAI than others. This implies that this group of Staff Development professionals would be effective at working on tasks where a "new twist" is needed and that they could be especially valuable in working out change solutions in times of down-sizing and budget cuts.

The larger implication is to use the KAI to identify A/I styles for role assignment relative in solving program (and organizational) development problems.

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UNDERSTANDING ADULT REENTRY AS A CHANGE PROCESS: IMPLICATIONS FOR FACULTY AND STAFF DEVELOPMENT

Doe Hentschel[1]

Abstract

The adult reentry student is a person in the midst of tremendous personal change. The reentry student is typically propelled into the college environment by changes in job, career or lifestyle and in order to succeed in this new setting, must make additional changes in self-concept, behavior, roles, and economic situation. The reentry decision is, therefore, a complex change decision which is constantly reexamined and confirmed (or disconfirmed) in light of the student's experiences.

Attempts to understand the needs of reentry students are usually based on the conceptual framework of the adult as a learner. This paper presents change theory as an alternative theoretical base to enable faculty and staff to understand the intellectual and psychosocial needs of adult reentry students. A model of the innovation decision is presented showing how the prospective student progresses through the prescribed stages during the reentry process. Staff and faculty are recast as change facilitators and their roles and responsibilities are viewed from the perspective of assisting the reentry student in successfully managing the change decision.

More than a decade ago adult educators began to predict the time when adult students would become the majority population in American higher education. The constantly increasing need for new learning, the trend toward frequent career changes throughout adulthood, and the decline in actual numbers of traditionally aged college students have changed the demographics of this nation's colleges and universities just as many of us anticipated. To be sure, there are still some institutions which have retained their image and preserved their character as residential post-secondary institutions serving a homogeneous student body of post-pubescent youth who appear to need a faculty who will tell them what they should learn and an administration which probably should resurrect the philosophy of *in loco parentis*. But the vast majority of colleges and universities now enroll 30-50% adult students who combine their study with more traditional adult responsibilities of family, job and community involvement. The need for faculty and staff to approach these students differently is increasingly evident as campus demography shifts.

Most institutions which have attempted faculty and/or staff development have drawn from the literature on the adult as a learner which focuses on the value and deficiencies of the learner's past experiences, the present demands of adult life which have an impact on the financial, human and temporal resources available for college study, and the powerfully motivating force which the learner's goals and visions of a different future can be. Understanding the adult reentry student from this perspective leads one to recognize the need for flexibility, convenience, and a host of support services. As helpful as all of these ideas can be, however, the end result is frequently a cookbook approach to meeting the needs of adult reentry students which can be disastrous if the cupboard lacks any of the key ingredients.

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In 1982 I took on a challenge as Dean of Adult and Continuing Education at the State University of New York College at Brockport which has, in reflection and retrospect, served as a case study in institutional change. The College had been suffering from a steady enrollment decline for several years and as the new dean, I was charged with stabilizing that enrollment by increasing the number of adult students. At the time, the institution saw itself and was viewed by the constituencies it served as a rural college for residential students. It was struggling to overcome a reputation as a school for "jocks" and poor students. Its faculty was disillusioned and defensive. The student body had a traditional average age of about 20; and while 25% of the students were over 25, most of those were part-time graduate students studying educational administration, counselor education and public administration in off-campus programs in nearby Rochester, New York. Four years later, the College had a high profile in the Rochester metropolitan area among adults, its full time equivalent enrollment had stabilized and its headcount had increased, and its student body was comprised of 40% adult students. Evening and off-campus courses had increased dramatically as had non-traditional delivery via telecourses and videotaped courses. Policies and procedures had been revamped, and a new vitality was evident in classroom dynamics between professors and students.

Such a drastic change was not accidental. The driving force behind decisionmaking was the theoretical construct of adult learners as individuals in the midst of tremendous personal change. The decision to reenter college is a complex change decision which requires constant, highly competent support from change facilitators. As an internal change agent within the College, I used the resources, influence and power at my disposal to reeducate the entire college community and train them in change agent strategies so that they could assist reentry students. Given that reentry students must change their view of themselves, their roles, their attitudes and their behaviors if they are to be successful, the applicability of change theory seemed obvious to me. Our experience indicates that this approach has transferability to any situation involving an individual's decision to return to a formal learning environment after a hiatus of any significant length of time.

A MODEL OF THE INNOVATION/CHANGE DECISION

The change literature provides numerous examples of change models describing the process by which an individual adopts an innovation (Zaltman, et al, 1977, pp. 64-66). The models are typically linear and represent steps through which the person must progress with the implication that the sequential process is essential; steps cannot be skipped if the innovation is to be successfully integrated into the individual's lifestyle. For the purposes of understanding the adult reentry process as an innovation decision, a model which combines elements of the Rogers and Shoemaker model (1971, p. 103) with elements of the 1955 rural sociology model (Rogers and Shoemaker, 1971, pp. 100-101) is especially helpful.

If we focus on the prospective adult student as the "client," the process begins at the **awareness** stage during which the client becomes aware of the possibility of college reentry as an innovation, i.e., as a solution to addressing a felt deficiency. If, for example, an adult is considering career change as a way to improve his or her economic situation, there may be many ways to accomplish that change. If the client is unaware of the possibility of college reentry as an option, obviously the problem will be addressed in some other way. Conversely, it should also be obvious that awareness alone is not enough to propel the client into the registrar's office. We are all aware of many innovations which we never chose to adopt, either because we do not feel a great enough need to make a change or because we simply don't know enough about the innovation to make an intelligent choice about adopting or rejecting it. At this stage of the innovation process, the prospective adult reentry student needs to become aware of the fact that reentry is a common phenomenon today, that adults are generally successful learners, that colleges in general, and this institution in particular, welcome adults and offer special programs and services appropriate to their needs.

The **knowledge** stage follows quite naturally. The client must gather specific information about the innovation and learn how it will meet the identified need. If we think of this as an information gathering exercise, it will be obvious what kinds of activities the prospective student will engage in during this stage. Information about the institution, its courses, programs, costs and services will be sought. At the knowledge stage, the client will also seek information about the impact of adopting the innovation. In the case of the career changer, future employment possibilities and the placement services of the college will be relevant.

It appears that many college and university administrators, advisors and counselors believe that information alone will lead the client to enroll. Such is not the case. The next step is the **persuasion** stage during which the prospective student needs to identify and confront the barriers to successful adoption, anticipate problems with adoption, and generally take an affective position in regard to the innovation. The prospective student needs to feel that returning to school will be a positive experience, that other adults have been successful, that there are helpful people and systems at the institution, that family friends will accept and support the decision, that the goal (a course, a degree, etc.) is appropriate and achievable, etc. At this stage of the innovation process, personal contact is virtually required. The client needs to talk through questions and concerns and will do so with anyone who may appear to have a valued opinion. Often the source sought out by the prospective student is not an official source; it may be a friend or family member or employer who may or may not be supportive and well informed.

Assuming that the client forms a positive attitude about the innovation, a vicarious or actual **trial** will be the next step. The prospective student may drive to the college, walk around the campus, try out the cafeteria, or even take a course before committing to a **decision**, which is the fourth stage. The decision may actually be a rather short stage but nearly always follows a lengthier trial or group of trial activities during which the prospective student samples reentry. It is important to be aware of the fact that a negative experience at the time of decision can reverse the entire process. A prospective student who has successfully reached the point of enrolling can reverse that decision instantaneously if there is no place to park at registration, if the building in which registration takes place is difficult to find or inaccessible, if registration personnel are brusque or the form complex, or if the course selected is full and a new choice must be made.

Just as they often assume information leads to reentry, college staff and faculty often think that once the student has enrolled, the reentry decision is completed. However, the final stage of the process, **confirmation**, continues indefinitely and requires facilitation as well. The student reevaluates the decision in light of new experiences and new information and confirms or disconfirms it over and over. Thus if the complexities of juggling new time demands prove worse than expected or if the institution proves to be less hospitable to adults than had been anticipated, the student may drop out or transfer to another school, disconfirming, in the first instance, the reentry decision itself, or in the second case, the choice of the particular institution. On the other hand, positive experiences lead to reaffirmation. Developing a new peer support group, experiencing the contagious joy of learning, and feeling pride when one's institution is positively recognized in the media contribute to confirmation and serve to support the student when difficulties arise.

Throughout the entire change process a dynamic and powerful tension exists between the known status quo and the promise of a new and better future or the risk of one that is less satisfactory than the present. The more difficulties which appear during the various stages, the more likely the client is to give up the idea of the change or to seek a simpler way to achieve the goal. In the best of circumstances, getting a college education is a long and difficult achievement. For the reentry student who has numerous conflicting demands which are essential rather than superfluous, who may have a history of unsuccessful or unsatisfying educational experiences, who is undoubtedly uneasy and awkward about being in an environment not associated with an adult lifestyle, and who is most likely dealing with other uncertainties and changes which propelled him or her into the reentry decision in the first place, it is a herculean task to resist the temptation to give in to the comfort of the known and understood status quo. It requires the dedication and skill of the entire college community to support this change decision from the awareness stage all the way through to confirmation.

THE INSTITUTION'S PERSONNEL AS CHANGE FACILITATORS

College personnel, including faculty, administrators, counselors, secretaries, telephone operators, public safety officers and anyone else who has any contact with students or prospective students, must rethink their roles and responsibilities if they are to understand how to be helpful to the reentry student. As facilitators of the change process, they will have to fulfill functions quite different from their historical perception of their jobs. A student who comes to the first class of the semester could be at the persuasion stage or the trial stage of the reentry decision. The information received from the public safety officer about where to park may move that person on to the decision stage of the process or convince him or her that going to college would be a demeaning or threatening experience. Likewise, once the class has begun, the professor has an opportunity to assist in creating a positive attitude or to frighten the student and reverse the movement toward a decision to enroll. The student may be at the confirmation stage, having already decided to return to college. In this instance, every encounter will be scrutinized from the perspective of "Did I make the right decision? Does going to college (or taking this particular class) make sense for me?" The public safety officer who sees his or her function solely as enforcing rules to control disorder will most probably approach that student quite differently from the officer who recognizes that he or she has a chance to support this prospective student in the change process and that doing so may help that person successfully achieve reentry. The professor who defines teaching as disseminating information will approach an introductory class session differently than the professor who feels a responsibility to assist the student in the change process. A staff development plan should provide an understanding of the change process and the steps through which the prospective reentry student moves. Understanding how to facilitate the change involves knowing the functions of change facilitators and choosing from a repetoire of strategies appropriate to each function.

The first function is that of the catalyst or stimulator. The change facilitator creates a disturbance or dissatisfaciton with the status quo which propels the prospective student into the awareness stage. Many of our marketing strategies serve this function; creating the "hook" that gets the attention of the target takes skill. Too often we miss the point because we jump right to providing answers and information instead of first stimulating the desire or need to make the change.

Change facilitators also serve the function of solving problems or giving solutions. Support personnel are frequently called upon to fill this function. The prospective student who calls to find out how to register needs clear and correct information. The student may be at the knowledge stage or the decision stage, but difficulty in getting the answer/solution will quite possibly move him or her to a negative affective position about reentry thus dissuading him or her from enrolling. Professors, too, are often called upon to serve as solution givers. The reentry student who is at the trial stage may take a course to see whether or not he or she can handle the academic requirements. The professor becomes the primary link to the institution and, in this framework, the most significant change facilitator. When the student asks for assistance, many times the most effective response is to provide the answer and tell or show how to apply it. If the solution appears elusive or complex, too often the person in the midst of the change decision will view that difficulty as reason to abandon the innovation, in this case, reentry.

A third function filled by change facilitators is that of resource linker. As an outsider, the professor, advisor, or receptionist knows the system and what it has to offer the reentry student. Assisting the student by providing access to those resources which can be applied to the problem of the moment can be extremely effective, both in terms of the immediate need and the student's growing sense of independence and empowerment in the new environment. The change facilitator who takes this role seriously will make every effort to see that the link is actually made. Instead of just referring a student to the financial aid office, the receptionist might call that office, speak to the appropriate counselor and explain that she is sending the student over. Thus the way has been paved and the follow-through required of the student is reduced somewhat, thus increasing the likelihood that the new connection will be made. A traditionalist might view this as "spoon feeding" or giving special treatment to the student, but the change facilitator will support and encourage the client in every way possible as he or she struggles with the dynamic tension between adoption of the innovation and return to the old status quo.

The final function of the change facilitator is that of process helper. In this role, the goal is to assist by helping the client develop skill in the process of problem solving so that he or she can solve future problems independently. The change facilitator becomes a teacher in the truest sense, helping the student recognize and articulate the problem, diagnose it, set objectives for implementing change, identify and/or acquire resources appropriate to solving the problem, create and choose solutions, apply them and evaluate their effectiveness. An example of an advisor functioning as a process helper occurred when a student called to ask her advisor if she would intervene on the student's behalf and explain to a professor that the student would be absent from class all week because she did not have bus fare. The advisor agreed to do so (serving as a problem solver), but pursued the problem further as a process helper. She assisted the student in articulating the real problem as a need for additional financial assistance which had been unavailable because the student was not matriculated. Working through the problem solving process, the student identified her real goals, matriculated as a part-time student, was assisted in applying for financial aid for which she was eligible, and progressed on her way toward a college degree and a new life. Had the advisor merely solved the immediate problem of notifying the professor about the reason for the student's absence, it is likely that this or a similar problem would have occurred in the future, each time increasing the chances of the student giving up her attempt to reenter college.

The ultimate goal of the change facilitator is to assist the client at every step of the change process and facilitate movement toward decision and confirmation. The orchestration of successful strategies will depend upon understanding where in the process the student is and matching strategies with the immediate need. The change facilitator should strive to function as a process helper whenever possible, because as the student develops skill in managing change, the dependence on the facilitator is reduced and eventually eliminated.

Too many institutions seeking to recruit and serve adult reentry students leave the matter of supporting them in the hands of a few adult reentry specialists in a unit identified with continuing education. This approach is self-defeating in several respects. The adult reentry specialist is overburdened and able to be an effective change facilitator with a limited number of students, and, in a well-meaning attempt to increase his or her "case load" may rely on functioning as a solution giver. The student then becomes dependent on the specialist's solutions and returns again and again with new difficulties. This leads to a growing sense of discomfort that reentry is too problematic to continue and a disconcerting sense of a loss of independence and self-reliance which are so necessary to a positive adult self concept. If the specialist functions as a resource linker, but the resources elsewhere in the institution are not oriented to adult reentry students, the results can be even worse.

To avoid these scenarios, the entire institution needs to be equipped to assist reentry students, thus enabling the adult reentry specialists to serve as "team leaders" and as catalysts for ongoing institutional change. The starting point is developing a conceptual framework within which all personnel can reexamine and modify their responsibilities and their performance in appropriate ways. Change theory, and the model of the individual innovation decision presented here appears to be extremely effective as a foundation for such a staff development process.

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SELF-RELIANT BEHAVIORS AND VALUE ORIENTATIONS OF ADULT LEARNERS ENGAGED IN CONTINUING PROFESSIONAL EDUCATION

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Abstract

Self-reliant behaviors (LOC) and value orientations of adult learners engaged in professional continuing education courses within two university professional schools revealed significant school and sex differences as tested by ANOVA's. Males in both schools (Business and Education) were more internally oriented on Rotter's I-E scale. Rokeach's Value Survey showed that the top ranked terminal values were nearly the same for both sets of professionals. "Self-respect" was ranked first by business professionals. "Family Security" was ranked first by educators. "Ambitious" was the most statistically significant instrumental value difference between the two professions. Business professionals rated it fourth, educators ranked it eleventh.

INTRODUCTION AND REVIEW OF LITERATURE

The emergent concept of continuing professional learning wherein the actions of persons and groups seek to fulfill their professional potentialities by guiding their own careers has been documented extensively (Houle, 1980; Stern, 1982). Further, the newer differentiation between "professionalism and professionalization" suggests a dynamic lifetime educational process of becoming more professional in one's chosen career (Houle, 1980; Stern, 1982). Hence, the notion of a profession as a fixed entity in time in which all learning can be achieved or as a static closed system of thought is rejected in favor of a more dynamic concept that is open to the emergent needs of society (Houle, 1980). A rapidly changing technological society therefore requires that every professionalizing occupation must improve its pattern of lifelong learning in order to respond more quickly to societal needs.

One of the major providers for continuing professional education (CPE) is the professional school that resides within a university structure. In some of these professional schools conflicts sometimes exists within the faculties. Some believe that their major efforts should be aimed solely at full-time pre-service students and not necessarily with the continuing educational needs of adult student bodies. However, with the decline of the world's birth rate (the post-"baby-boomer" generation) professional schools can no longer concentrate solely on a youth-centered program of instruction. They will need to focus on the continuing learning needs of adult professional practitioners who seek to continue to improve their occupational competencies. However, this itself poses problems. The characteristics and learning styles of a new generation of adult learners who use universities for professional continuing learning tend to differ significantly from pre-professional youths. Research has established this fact for some time (Cross, 1976; Londoner, et. al., 1985,1987). Adult learners tend to exhibit significant differences in the areas of self-reliant behaviors and value orientations (Londoner, et al., 1985, 1987). Should faculty pay heed to these differences among the adult learners who are becoming more prominent in their classes? Research answers to these questions are just now being systematically studied. One thing is fairly clear. Traditionally trained faculty do not appear to have made any real adjustments to their teaching styles or techniques to accommodate these adult learners. Presumably, this is because faculty tend to be more subject than learner oriented.

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Past adult education and adult development studies stress that as age increases there is an internal orientation shift in perceived values and locus of control (Levinson, 1978; Gould, 1978; Knoop, 1981; Londoner, et. al., 1985, 1987; and Linder, et. al., 1985, 1987). There is also evidence that males tend to be more internally oriented than females (Londoner. et. al., 1985, 1987).

Social learning theory (Rotter, 1966; Phares, 1976; Lefcourt, 1982, 1983) is used to explain and interpret Locus of Control (LOC) and self-reliant behaviors. This theoretical construct stresses the idea that behaviors are determined simultaneously by the variables of expectancy and reinforcement value. *Internal control* refers to the belief that the occurrence of reinforcements are contingent upon one's own behaviors in relation to the physical environment. *External control* refers to the belief that fate, luck, chance, powerful others or the system determines one's outcome in relation to the physical environment.

The pioneering research efforts of Rokeach (1973, 1979) on value orientations has shown that there are two developmental patterns in values as people age. Specifically, he described two sets of values: terminal or ends-oriented values and instrumental or means-oriented values. Terminal values refer to goals that are worthy of striving for (e.g.,"Self-Respect," "Happiness," "Social recognition," etc). Instrumental values refer to conceptions of desirable modes of behavior that help to attain the valued outcomes (e.g., "Honest," "Independent," "Self-Controlled," etc.).

The systematic study of the relationship that may exist between LOC and values of adult learners in higher education settings was recently begun with a survey of adult learners (undergraduates) in a School of Education (Londoner, et. al., 1985) and in a survey that compared undergraduate adult learners in Schools of Eduction and Business (Londoner, et. al., 1987). The present study extends the earlier work by examining the LOC orientation and the value orientations of graduate school adults enrolled in professional continuing education courses within the professional schools of Business and Education in a large urban university.

Specifically, the following research questions guided this study:

1. What are the LOC orientations of adult professional learners in Schools of Business and Education?
2. Do males and females within the Schools of Business and Education display different LOC orientations?
3. What are the value orientations of adult professional learners within Schools of Business and Education?
4. Do males and females within the two professional schools display different value priorities?

METHOD

Adult learners enrolled in Business and Education programs at Virginia Commonwealth University during the 1983-1986 academic years were the subjects of this and the earlier studies. They ranged in age from 18 to over 40. The original survey was also disseminated to graduate school professionals as well as undergraduate adult learners. This study analyzes only the data pertaining to adult professionals in graduate continuing education courses. There were 133 subjects (86 males, 47 females) in the Business School sample and 156 (29 males, 127 females) in the Education School sample for a total of 289 adult professional learners.

Rotters's (1966) Internal-External Locus of Control Scale was used. It consists of 23 question pairs within a forced-choice format plus six filler questions. The I-E Scale has been judged appropriate for use with college educated adult subjects (Lefcourt, 1981).

same value rankings as the School of Education professionals except that "Inner Harmony" was ranked fifth by the educators. Thus, in both professional schools, the top four ranked terminal values were viewed similarly. However, the fifth ranked values do differ. There were some notable statistically significant main effects found among the terminal value ranks within and between each of the schools. For example, "Happiness," had both a school difference [F(1, 279)=7.42; p=.007], and a sex difference [F(1,279)= 5.42; p = .021]. Business professionals ranked the value second while educators ranked it fourth (Means= 6.48, 7.23 respectively). Females within both schools ranked it more important than males (Business male Means= 6.81; Business female Means= 5.87; Education males means= 8.69, Education female Means=6.90). Thus, being happy is a value viewed more importantly by females, but especially by those females in business majors.

There was a significant school difference for the value "Family Security." Business professionals of both sexes ranked it fourth while education professionals ranked it first (Means= 6.83 and 5.60 respectively), [F(1,279)=7.45; p = .007]. "A Sense of Accomplishment" had both within school program/major differences [F(3,279)=2.90; p =.035] and sex main effect differences across schools [F(1,279)= 8.79: p =.003]. Non-MBA business professionals ranked it second and MBA business professional ranked it fifth. Education professionals in the "Other" category ranked it fifth while Elementary majors ranked it eighth and Secondary majors ranked it tenth. There were consistent overall sex differences across schools with males ranking it more importantly than females (Business male Means= 6.76, female Means= 7.34; Education male Means=6.10, female Means= 8.72 respectively). Those persons classified as "Other" include people who are in areas such as adult education, school administration counseling, special education, physical education and a few in an interdisciplinary doctoral program in education.

There was a significant sex difference for the value "Wisdom," [F(1,279)=12.87; p = .0004]. Males across both schools ranked it more importantly than females (Business male Means=7.13; female Means=9.45; Education male Means=7.03, female Means=8.71). It is surprising to note that education professionals who have direct contact with and responsibility for teaching the nation's youth should not value "Wisdom" higher in their value structure. Perhaps women who have been socialized as young girls not to compete academically with boys do not shift as much in their orientation as adults and still are reticent about exuding the value of wisdom even to their own young students.

Finally, the value "True Friendship" had a significant sex difference [F(1,279)=3.62; p=.051]. Females in both schools rated the value more important to them than males. Business females ranked it sixth and males ninth (Means= 7.62 and 8.78 respectively). Education females ranked it sixth and males tenth (Means= 7.80 and 9.07 respectively). It may be that women are more open to seeking friendships within organizations while men may be more leery at creating relationships within a competitive work culture.

Instrumental Values

Table 3 displays the instrumental value responses to questions three and four. The top five instrumental values for business professionals were "Honest," "Responsible," "Capable," "Ambitious," and "Independent." The first two ranks for education professionals were identical.

Table 3. Rankings of Instrumental Values by Sex and Program for Professionals Who are Students in School of Business

		Sex		Program		MBA		Non-MBA	
Value	All	M	F	MBA	Non MBA	M	F	M	F
Honest	1	1	1	1	1	1	1	1	1
Responsible	2	2	2	2	2	2	2	2	2
Capable	3	4	5	3	3	4	5	4	3
Ambitious	4	3	7	4	6	3	7	5	9*
Independent	5	5	3	5	4	5	3	3	9*
Loving	6	6	4	6	5	6	4	6	5*
Intellectual	7	7	6	7	9	7	6	11	5*
Broadminded	8	9	8	8	10	9	9	12	7
Courageous	9	10	11	11	7	11	12	7	4
Cheerful	10	11	10	10	11	12	8	10	12
Logical	11	8	15	9	14	8	14	13	15
Self-Controlled	12	12	13	13	12	13	13	8	13
Forgiving	13	14	9	15	8	15	10	9	8
Helpful	14	15	12	14	13	14	11	14	11
Imaginative	15	13	14	12	15	10	15	17	14
Polite	16	16	16	16	16	16	16	15	16
Clean	17	17	17	17	17	17	17	16	17
Obedient	18	18	18	18	18	18	18	18	18
Sample Size	133	86	47	98	35	68	30	18	17

Rankings of Instrumental Values by Sex and Teaching Level for Professionals Who are Students in School of Education

		Sex		Teaching Level			Elem		Secon		Other	
Value	All	M	F	El	Sec	Othr	M	F	M	F	M	F
Honest	1	1*	1	1	1	1	1	1	1	1	1	1
Responsible	2	1*	2	2	2	2	2	2	1	2	2	3
Loving	3	8	3	3	4	3	10	3	6	4	9	2
Capable	4	4	5	4	6	4	1	5	8	5	3	4
Independent	5	10	4	6	3	5	8	6	9	3	12	5
Helpful	6	5	6	5	7	6	3*	4	4	8	11	6
Broadminded	7	3	8	11	5	8	7	11*	3	6	4	11
Intellectual	8	9	7	7	8	9	3*	8*	12	7	7	10
Self-Controlled	9	6*	10	8	9	10	11	7	7	10	5	12
Forgiving	10	13	9	10	10	7	13*	8*	14	9	6	7
Ambitious	11	11	11	9	12	12	5	10	10	13	13*	9
Logical	12	6*	14	15	11	14	9	15	5	11	10	14
Cheerful	13	15	12	13	15	11	15	11*	16	15	15	8
Courageous	14	12	13	14	13	13	13*	14	11	14	13*	13
Polite	15	14	15	12	14	15	12	13	13	12	8	16
Imaginative	16	16	16	17	16	16	16	17	15	16	16	15
Clean	17	18	17	16	17	17	18	16	18	17	17	17
Obedient	18	17	18	18	18	18	17	18	17	18	18	18
Sample Size	156	29	127	32	65	59	4	28	15	50	10	49

Rokeach's (1973) Value Survey was the second instrument used. It consists of 18 alphabetically listed terminal and instrumental values on separate pages. Subjects rank order each list of values according to the relative importance of each value to themselves.

A three-part survey comprising demographic data plus the two instruments was given to randomly selected faculty to distribute to their classes. Part I asked information concerning subjects' age, sex, marital status, work, and academic major. Part II consisted of Rotter's I-E Scale and Part III included Rokeach's Value Survey (Form D). Subjects took the questionnaires home, completed and returned them via self-addressed envelopes. A 54% and 50% rate of response was obtained from the Schools of Business and Education respectively.

RESULTS AND DISCUSSION

Questions one and two asked what were the LOC orientations of adult professionals within the Schools of Business and Education and whether or not there were sex differences in these orientations. Table 1 displays the data for these questions. A mean score value of 8.50 is the standard indicator of a more internal LOC orientation in most studies.

The data show that males in both schools evidenced a more statistically significant internal orientation (Business Mean=7.69; Education Mean=7.79) than do the females in either school [$F(1,279)=10.34$; $p = .002$]. This finding is consistent with Londoner, Linder and Bauer (1985, 1987). Females within Education obtained a lower mean score than females in Business (Means= 8.98 and 9.43 respectively). It would appear that women in education perceive that they have more control over the environment than do women in business. This follows since many elementary and secondary school teachers do control their self-contained classrooms almost entirely by themselves.

Table 1. Mean Locus of Control by Sex and School

	SEX			
	MALE		FEMALE	
	N	MEAN	N	MEAN
SCHOOL				
BUS	86	7.69	47	9.43
EDU	29	7.79	127	8.98

Terminal Values

Questions three and four asked what are the value orientations of adult professional learners within the Schools of Business and Education and whether or not males and females displayed different value priorities. Table 2 presents the terminal value rankings by sex and academic program or major within the two professional schools.

Table 2. Rankings of Terminal Values by Sex and Program for Professionals Who are Students in School of Business

Value	All	Sex		Program		MBA		Non-MBA	
		M	F	MBA	Non MBA	M	F	M	F
Self-Respect	1	1	1	1	1	1	1	6	1
Happiness	2	5	2	3	3	4	2	3	2
Freedom	3	2	3	2	4	2	3	5	4
Family Security	4	3	4	4	6	3	4	4	8
Sense of Accomplishment	5	4	5	5	2	5	7	2	3
Wisdom	6	6	8	7	5	6	9	1	9
Mature Love	7	7	7	6	8	8	6	8	5
True Friendship	8	9	6	8	7	9	5	7	6
Inner Harmony	9	8	9	9	9	7	11	10	7
A Comfortable Life	10	10	11	10	10	10	8	9	13
Salvation	11	11	10	11	11	12	10	11	10
A World of Peace	12	13	12	13	12	13	12	12	11
An Exciting Life	13	12	14	12	15	11	14	13*	16
Social Recognition	14	14	17	14	17*	14	16*	17	17
National Security	15	15	16	15	13	15	16*	16	12
Pleasure	16	16	15	16	14	16	15	13*	15
Equality	17	18	13	17	16	17	13	18	14
A World of Beauty	18	17	18	18	17*	18	18	15	18
Sample Size	133	86	47	98	35	68	30	18	17

Rankings of Terminal Values by Sex and Teaching Level for Professionals Who are Students in School of Education

Value	All	Sex		Teaching Level			Elem		Secon		Other	
		M	F	El	Sec	Othr	M	F	M	F	M	F
Family Security	1	1	2	1	2	2	5	1	2	1*	2	2
Self-Respect	2	2	1	2	1	1	1*	2	1	1*	5	1
Freedom	3	4	3	3	3	4	4	5	3	3	8	4
Happiness	4	7	4	5	4	3	9*	3	6	4	7	3
Inner Harmony	5	6	5	4	7	6	7	4	5	8	12	5
True Friendship	6	10	6	9	5*	7	9*	6	8	5	9	7
Sense of Accomplishment	7	3	9	8	10	5	6	9	4	10	1	8
Wisdom	8	5	8	6	5*	10	1*	7*	7	6	3	11
A World of Peace	9	12	7	10	9	8	8	11	11	9	13	6
Mature Love	10	8	10	11	8	9	12	12	10	7	6	9
A Comfortable Life	11	9	13	12	12	11	17	10	9	13	4	12
Salvation	12	11	12	7	11	15	3	7*	14	11	10	16*
Equality	13	14	11	13	13	12	11	13	12	12	14	10
National Security	14	15	14	14	14	14	13	14	15	14	15*	14
An Exciting Life	15	13	15	15	15	13	14*	16	13	16	11	13
A World of Beauty	16	18	16	16	16	17	16	17	17	15	18	15
Pleasure	17	16	17	17	17	18	18	15	16	17	17	18
Social Recognition	18	17	18	18	18	16	14*	18	18	18	15*	16*
Sample Size	156	29	127	32	65	59	4	28	15	50	10	49

In the School of Business the overall top five ranked terminal values were: "Self-Respect," "Happiness," "Family Security," and "A Sense of Accomplishment." These are approximately the

However, they differed after that. "Loving" was ranked third, "Capable" was fourth, and "Independent" was fifth. The major statistically significant difference was obtained for the value "Ambitious." It was ranked eleventh by educators and fourth by business professionals (Means= 9.92 and 7.18 respectively) [$F(1,279)=5.88$; $p= .016$. Although the sex differences within the school of Business were not statistically significant, it is instructive to note the trends. Clearly, the males in each of the Business majors perceived being ambitious as more highly valuable than their female counterparts in the same major. In general, it appears that professional educators do not believe that being perceived as being ambitious is helpful in the school work environment. On the contrary, people in business do.

There was a significant difference between schools for the value "Helpful," [$F(1.279)=9.78$; $p= .002$. "Helpful" was ranked sixth by professional educators and fourteenth by business professionals, (Means= 8.52 and 10.71 respectively). A statistically significant sex difference was obtained for the value "Loving" across schools, [$F(1,279)=4.67$; $p = .032$]. Females across schools value "Loving" more importantly than males. Apparently it is a highly important value for women in both professions since it is in the upper one-third of their instrumental value orientations.

CONCLUSIONS

If universities are ever going to enter into Houle's (in Stern, 1982) third era of CPE, which focuses on raising the optimum level of performance of all practitioners rather than on remedial education, they must become more aware of the characteristics of their newer adult student bodies. These professionals have strong self-reliant behaviors and significantly different value orientations when compared to pre-professional undergraduates. Men and women, but especially the men, perceive that they obtain valued reinforcements from their environments because of what they do and not because of the actions of others. Desirable worthy goals (terminal values) appear fairly similar to the professionals in this study although they differed somewhat in the perceived means (instrumental values) for getting there. Similar studies on other adult learners in professional schools might provide credence for one of Houle's basic beliefs, *viz*., that there should be much more collaboration between the professional schools within universities because most of the characteristics of professionalization are common to all occupations engaged in the CPE process.

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THE INFLUENCE OF ADULT STUDENTS ON FACULTY AS LEARNERS : A TRANSFORMATIVE PROCESS

Barbara Rich[1]

Abstract

The literature suggests that at least one aspect of adult learning involves a transformative process which comes about when the learner begins to understand the psychological and/or social and historical context which has influenced his/her role in life. The emphasis of the transformative literature has been on the influence of change among students rather than faculty.

The research, which is the source for this paper, indicates that faculty also undergo a change as a result of working with adult students. Faculty begin to develop new paradigms which affect them as teachers and learners. While further study is needed, the findings suggest that faculty as learner has a direct relationship to classroom practice.

TEACHERS AS LEARNERS - A TRANSFORMATION

The research for this paper (Rich, 1986) emerged from a doctoral study examining faculty perceptions of adult learners and the influences of those perceptions on teaching behaviors. One of the most significant findings of that research was the influence of adult students on faculty as teachers and learners. This paper will briefly discuss the current literature, the methodology, the findings and the implications for practice.

Literature

There is a body of literature (Apps, 1985; Gould, 1978; Mezirow, 1978; Freire,1970) which suggests that one aspect of adult learning involves a transformative process. This proces occurs when the learner begins to understand the psychological and/or social and historical context which has influenced their role in life.

Apps (1985, p. 157) calls this process "emancipatory learning". He sees this as a moving away process.

He states:

> one is being liberated from something to an idea, a way of thinking, a set of assumptions and replacing this with a different idea, a different way of thinking.

For Gould (1978) this transformation begins when adults can rid themselves of the illusions of childhood and confront the reality of adulthood. Mezirow (1978) suggests that adults must first recognize the depending roles their culture has placed on them, and take the necessary steps to change their roles. Freire (1970) suggests that man must denounce his present reality which is dehumanizing and recreate a new world of reality through praxis. The teacher in this process moves away from the banking method where he pours information into the student and engages in a mutual process of learning.

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Methodology

The research for this paper was phenomenological in approach and utilized elements of grounded theory methodology.

The data for this research was obtained from 45 faculty currently teaching adults in undergraduate colleges, primarily in the Northeast and Mid-Atlantic states. The colleges, all of which have enrollments of under 2,000, are liberal arts colleges, historically women's colleges, all founded originally by women religious. Full-time faculty at these institutions usually range from 35-50 in number.

A series of open-ended pilot interviews with faculty about 1½ to 2 hours in length were held as a first step. The interviews were not based on any notion of relevance, but on broad issues regarding adult students and teaching behavior. The researcher then compared information from these interviews and began identifying central themes, using the constant comparative method for coding. A guideline for the remaining interviews was developed from these themes. This process allowed for incorporation of any new concepts which emerged during the course of the interviews.

A substantive theme which emerged was the role of the teacher as learner and person.

The Findings and Discussion

The most enthusiastically discussed consequence of having adult learners in the classroom was the influence reported by faculty of those adults on them as teachers. Whatever the orientation or discipline of a teacher, 39 of the 45 responded that adults have significantly changed them as teachers.

For instance, a faculty member stated:

> I think we all benefited from the adult student...in the sense, we have grown as teachers, as educated people and members of society...my own thinking about education has changed with the interaction of adults. (respondent 3)

The influence of adults on faculty as teachers seems particularly significant because it transcends specific teaching techniques and appears to be more philosophical in nature. It is this internalized change that Apps (1985), Freire (1970) and Mezirow (1978) talk about in discussing the transformation process.

Faculty described themselves as moving through a searching process of reflection and change similar to their students. A faculty member stated:

> I held assumptions and they were inaccurate. The difference isn't age. It is that for many of them and for us (faculty) their experiences, their life has pigeonholed them. They and we have never had to make any deviations and now they are and so am I. (respondent 12)

Along with this process of change comes a level of comfort and sharing, a base of understanding between faculty member and student. Lindeman (1961), Mezirow (1972), and Gould (1978) would argue that a level of comfort and sharing is the first step in a mutual learning process and in a transformation process.

Implications for Practice

The kind of change faculty speak about in this research has, in many ways, far greater implications than questions related to specific teaching behaviors.

> "If faculty begin to have a real level of understanding about their own values, attitudes, meaning of their lives, they will perforce bring that awareness to the classroom." (Rich, 1986, p. 93)

This is by no means an easy task. For as Apps (1985, p. 154) suggests "emancipatory learning, by its nature, challenges the status quo...it is usually uncomfortable for educators and the institution".

Faculty development would appear to be one way of providing a vehicle for discussing this change and for examining a set of assumptions from which a new paradigm can emerge for adult educators and for their students.

Further Study

Further study is needed both in examining how transformative changes in faculty influence adult students in the learning process and in exploring whether these findings are replicated in a larger sample of faculty at undergraduate institutions.

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COMPARING AGRICULTURAL EXTENSION SYSTEMS: A SOCIO-INSTITUTIONAL MAP

William M. Rivera[1]

Abstract

This paper confronts three constraints on discussion of the topic: (1) its breadth--"extension' is a function operating in various sectors of society, not just agriculture, and indeed, there are a variety of concepts regarding extension--even within the agriculture sector; (2) the different ways in which agricultural extension is organized at national levels, and (3) the multiplicity of key internal and external factors impacting extension.

I. THE PROBLEM OF DEFINITION

First, extension may refer to more than agricultural extension. Indeed, it is a broad-based term which is used by various sectors--e.g. industrial, health, agriculture, education. As Mosher (1976) notes, the term originally derives from "university extension." The term therefore concerns numerous sectors of society and relates to overall--and not just any one particular sector of--development.

EXTENSION AS PART OF OVERALL, AS WELL AS AGRICULTURAL, DEVELOPMENT

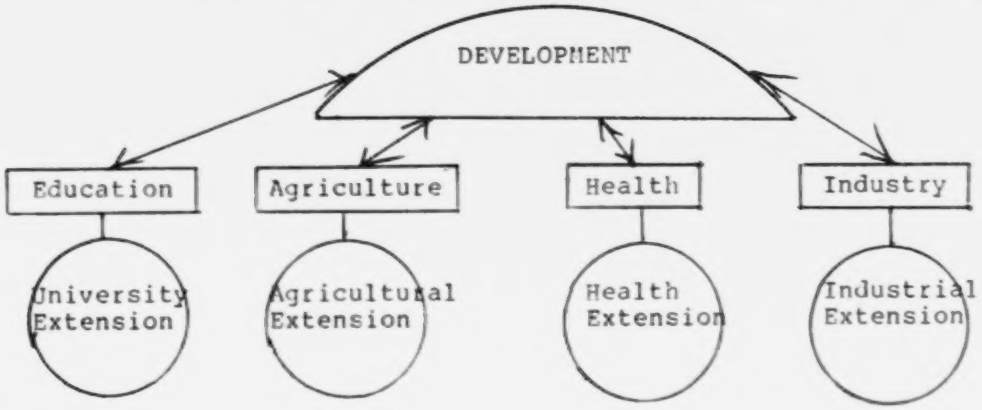
DEVELOPMENT
Education
Agriculture
Health
Industry
University Extension
Agricultural Extension
Health Extension
Industrial Extension

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Figure 1 graphically points out that extension is a function relevant to sundry sectors and organizations of society. Indeed, in a discussion of the T&V system, Israel (1983) underscores that the T&V management principles developed specifically for agricultural extension are applicable to other systems involved in the delivery of nonformal education.

Agricultural extension may be defined very broadly or quite narrowly which further renders its discussion complex. There are at least three ways to interpret the breadth of agricultural extension, viz.:

i) Strict interpretation of the function of extension as operating to disseminate information only for the purposes of improving production and profitability of farmers (Agricultural Development).

ii) Broad interpretation of the function of extension as serving to advance rural communities, but including agricultural development tasks (Rural Development).

iii) Broadest interpretation of the function of extension as providing nonformal agriculturally related continuing adult education--for multiple audiences: farmers, spouses, youth, community, urban horticulturalists (Community Educational Development).

Thus, agricultural extension may play various roles, that of (a) transferring technology (hard and soft) to farm producers, (b) catalyzing rural development in rural areas, and (c) fostering continuing and lifelong education among both rural and urban populations. In some cases, as with the U.S. Land Grant/Cooperative Extension System, all three of the above programmatic orientations may be observed to operate within the scope of the organization. In third world developing countries, by contrast, most systems tend to be strictly geared to agricultural production services.

II. DIFFERING NATIONAL ARRANGEMENTS FOR AGRICULTURAL EXTENSION

At least three different internal public organizational patterns of extension agencies have been identified in Africa and Asia. Blanckenberg classifies these as (a) "the sectoral governmental service" type, (b) the "subsectoral parastatal intervention society" type, and (c) the "unified service with mobilization of local resources" type.

The Sectoral Governmental Service--In brief, the first type (sectoral government service) is the most frequently encountered. Usually the Ministry of Agriculture assigns main responsibility to a Department of Agriculture (DA) for agricultural development. The DA has a number of divisions--those concerned with research, extension and training, as well as others responsible for technical, economic, and administrative matters. The Extension Division usually consists of a small number of officers in the head office but has a clear line of command from the national level via province, district and division down to the village level. The ministry of agriculture arrangement is generally one which is hihgly centralized. The Director of the Department of Agriculture has a strong position with respect to staff management, programming and coordination of extension work.

The Subsecotoral Parastatal Intervention Service--The second main type of internal organization of agricultural extension services is based on parastatal intervention societies, dealing with a restricted range of agricultural activities. These are found especially in West Africa in countries formerly under French colonial rule; they usually deal with one crop, or a few important crops only (therefore the name "subsectoral"), or are responsible for rural development in a specified region. They generally have a high degree of autonomy. The Ministry of Agriculture, to which they are responsible, thus limits its concerns to overall planning, coordination and regulatory work.

Unified Service with Mobilization of Local Resources--The third basic form of extension service cited by Blanckenberg has developed in two far-eastern countries: Korea and Taiwan. While the services in these two countries differ in some respects, they share certain characteristics, viz: (i) mobilization of resources at the local and regional level; (ii) strictly decentralized extension programming; and (iii) development work entrusted exclusively or almost exclusively to one service.

The above characteristics may operate in other systems but as Blanckenberg states, it is a "pre-condition" for extension work in these two countries. Some consider these services to be unique models. Lionberger & Chang (1981) refer to the Taiwan system as an "alternative" to the U.S. model for third-world developing countries.

III. MULTIPLICITY OF KEY INTERNAL AND EXTERNAL FACTORS

The comparative study of agricultural extension systems is also complicated by the extent of the exogenous as well as internal factors that affect agricultural extension operations. Three exogenous factors that impact on extension are treated in the following discussion: the impact of donor organizations, national policy considerations, and the status of a country's knowledge base and its extension/research linkages. The internal factors affecting the success of extension systems include organizational and management factors, and also the attitude of participants--the target population.

Key External Factors:

Donor Organizations--A major factor exogenous not only to the agricultural extension organization but to the country in which extension operates is the contemporary reality of donor organizations and their interest in the development of agricultural extension. The importance of international and bi-lateral donor organizations can be appreciated by noting the World Bank's investment in agricultural extension of $1.8 billion since the mid-1960s. The international donor contribution to the development of agricultural extension is considerable and their influence on third world developing countries is incontrovertible.

Policy Supports--Within country situations, it is obvious that agricultural extension systems require policy supports--explicit, or at least implicit, as well as basic and recurring resource allocating supports (Rivera & Schram, 1987, p. 270). It would be futile to discuss agricultural extension systems without considering the realm of politics and the context created by policy mandates which are the expression of politics. The politics underlying agriculture and which affect extension are of at least two major kinds: (1) definition of the system mission as dictated by the political will of the country and (2) the accompanying relevant policy mandates which ultimately affect the carrying of that mission, i.e. price, credit, and supply policies) that are necessary to make extension effective. These political/policy determinations generally clarify whether agricultural extension systems will be strictly production oriented and whether this orientation will be toward cash and/or food crops or whether the system will also be concerned with rural development. Governmental policy determinations as to price, credit and supplies affect extension systems decisively. In fact, farmers often enough base their acceptance or rejection of extension recommendations on these "higher" decisions (Schuh, 1987).

Linkages--A major consideration for the development of a successful extension system is its knowledge base and, interdependently, its research/extension/farmer linkages. A number of linkages are required to develop and maintain an appropriate knowledge base, according to the the World Bank (Second Asian Regional Workshop, 1984). These are:

1. Policy action mandating structures and oversight of extension/research linkages

2. Institutional action establishing procedures for extension-/research collaboration in the joint identification and forumlation of extension messages

3. Field action by research/extension staff to identify farmers' priority production problems

4. On-farm action to generate improved technology based on farmers' needs, as well as to validate and adapt new technology from International Research Centers (IARC's)

Key Internal Factors:

Organization and Management--Organizational change and management design for uncertainty and innovation are increasingly considered as crucial interventions for development. One of the cases used by Hage and Finsterbusch (1987) to illustrate the intervention of a system bringing significant structural changes to organization is T&V (p. 106-113). They claim that T&V exemplifies an intervention into organizations that were somewhat organic or undisciplined, changing them in the mechanical direction. In referring to it intervention in India, Hage and Finsterbusch state that, "T&V reoriented the extension service to become a model of a mechanical bureaucracy."

Middleton, Rondinelli, & Verspoor (1987) turn their attention to five fundamental components of management design: (a) the _environment_ ("those factors outside of a given system to which the system seeks to adapt in order to achieve its goals and survive"); (b) _tasks_ (the clusters of activities that must be carried out successfully to accomplish objectives); (c) _management processes_ (the dynamic patterns of action which enable the organization to determine and achieve its objectives by carrying out tasks); (d) _organizational structures_ (the predictable relationships among people and tasks, and between the organization and its environment); (e) _staff capacity_ (the values and skills held by the members of an organization and which are critical to management effectiveness).

_Beneficiaries--_In the final analysis, however, after the organizational and management reform factors have been underscored, the institutional linkages discussed, the national commitment highlighted for its importance to policy planning and financial supports--there remains _the farmer, the family unit, and their reality_ within the rural structure, all of which exists and acts in a cultural framework of ideological preferences, social values and behaviors and environmental resources. In this framework, often confronted are questions of 'peasant rationality' and farmer receptivity to innovation.

Farmer receptivity also depends on the preparation of the field agents and their ability to facilitate learning. Indeed, program delivery concerns management as well as field agents.

Recent lines of thinking about farmers recognizes their indigenous knowledge and the need for farmer participation in both research and planning. This is a particular characteristic of the farming systems research (FSR) (Galt & Mathema, 1987). Farrington & Martin (1987) review at length the concepts and practices current in farmers' indigenous technical knowledge (ITK) and farmers' direct participation in research (FPR).

SUMMARY AND CONCLUSIONS

This paper reviews the topic, and emerging field, of comparative agricultural extension. It confronts three constraints on discussion of the topic: (1) its breadth--"extension' is a function operating in various sectors of society, not just agriculture, and there is considerable variety of concepts regarding extension--even within the agriculture sector; (2) the several ways in which agricultural extension is organized at national levels; and (3) the multiplicity of key internal and external factors influencing extension's success, or failure. The international and comparative study of agricultural extension provide intellectual insight and the basis for practical action.

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LEARNING TO THINK IN SERVICE OF IMPROVING PROFESSIONAL PRACTICE *

Albert K. Wiswell[1]

Abstract

Different approaches for examining high level thinking and learning have commonalities in the emphasis on examining assumptions and reflecting on individual's processes and practice. Using results from research conducted with professionals engaged in management, administrative, and educational activities, a model was developed to help understand how and why people learn, correctly and incorrectly, in interpersonal situations that lack a designed learning orientation. It is suggested that untested negative attributions predominate, and contribute to the likelihood of error. Suggestions are drawn for initial steps for skill building in this area of professional practice.

THINKING AND LEARNING IN PRACTICE

Recent interest has been shown by adult educators in examining certain high level thinking skills, identified variously by such terms as critical thinking, perspective transformation, double loop learning, and reflecting in action. Additionally, interest has been shown in the types of instrumental and communicative learning that occurs in informal social contexts, often in the workplace. While these perspectives of learning and thinking each have a unique focus, there exist particular commonalities in addition to the advocating that these learning and thinking skills are important to develop. This paper contrasts these perspectives and offers a synthesis of the commonalities. It also addresses the dilemmas of applying these principles to practice, a frequently raised issue among adult educators.

Well known in the recent literature of adult education is the advocacy of increased sophistication of ways of thinking about the world, and examining the interpretations made of one's experience. Mezirow's perspective transformation (1985) challenges adult educators to enter the realm of helping learners examine the underlying assumptions that influence their interpretations, and therefore their actions. Brookfield (1986) also, in advocating the development of critical thinking skills, seeks to expand the role of educators to help learners examine the beliefs they hold that cause them to interpret the world in the way they do.

Somewhat parallel to these approaches, recent interest has increased in examining the area of informal adult learning. Both Rossing and Russell (1987) and Jarvis (1987) examine learning in the context of informal, social settings, adapting and extending Kolb's (1984) model of experiential learning. Rossing and Russell concentrate on identifying a link between beliefs and experiences that were instrumental in developing or changing the beliefs. They offer a preliminary model that places individual and situational factors as mediators from previous learning to new learning. Jarvis offers a typology of "learning in the social context" that contrasts reflective learning with non-reflective learning (as well as a category of 'non-learning,' to punctuate the observation that individuals frequently experience learning opportunities and fail to learn).

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* The author wishes to acknowlege the participation and guidance of Karen Watkins, University of Texas at Austin, in the design and conducting of the research reported in this study.

Still another parallel is the work of Argyris (1982) and Schön (1987), in describing the behavioral world they call Model I, in which underlying assumptions, or governing values, of achieving personal purpose, rationality, and minimizing negative feelings lead to dysfunctional interactions that limit learning. A characteristic of this behavior is the tendency of people to interact at a high level of inference, inferring meanings from others that are often accurate because of learned interpersonal skillfulness, but subject to error especially in difficult, defensiveness provoking situations. A source of learning error is the dysfunctional individual *theories-in-use* that explain their reasoning and behavior, but are not in conscious awareness, and are in contradiction to their *espoused theories* of action.

Schön elaborates on three features that he and Argyris have used in working with students in professional training: "joint experimentation", "Follow me!", and the "Hall of Mirrors." The learning climate permits trial of undeveloped strategies, modeling of competant behavior is advocated (at least in initial phases), and they consistently find individuals inacting their dysfunctional theories-in-use in the analysis of their own and others' cases.

This methodology for helping individuals learn about the theories of action that inform their behavior includes having them write down instances of problematic interactions on the right hand side of a paper. On the left hand side they write thoughts and feelings they had but chose not to express during corresponding parts of the dialogue. From this data (both the right and left sides), individuals are helped to identify attributions made without testing, evaluations made without illustration, and advocacies made without rationale, all indicative of error and informative in determining theory-in-use. The aim is to help individuals to be able to test, illustrate, and provide rationale in their reasoning as well as their interactions. As they do this, they are able to move closer to a Model II orientation, characterized by governing values of valid information, free and informed choice, and internal commitment to the choice with constant monitoring of the implementation.

The effect of experience on the quality of learning is a feature common to each of these approaches to understanding, and perhaps improving, critical thinking, perspective transformation, and reflective learning. While the value of these skills as universally crucial for maximizing each person's potential may be argued on both philosophical and practical grounds, the ability to employ a more rigorous and productive approach to learning and problem solving in complex interpersonal situations is not widespread, and not easily achieved. In addition, a gap exists between the theoretical formulations that describe these skills, and the acquisition of these skills in practice.

Improving practice in most professions includes both increasing technical competence and developing skills to examine how one's beliefs and attitudes affect that practice. These thinking skills that allow reflecting on assumptions have the potential of improving practice because individuals might be better able to detect faulty and dysfunctional interpretations of their experience. It is cavalier to suggest that these skills can be easily learned or quickly taught. On the other hand, there may be initial steps that individuals could employ as guidelines and techniques as a beginning point for learning to improve practice.

ASSESSING PROFESSIONAL S LEARNING PRACTICES

Presented here are some results from a study by Watkins and Wiswell (1987) which used structured interview techniques and a written instrument developed by the researchers, the Learning Practices Audit, to explore formal and informal learning practices of human resource development professionals in organizations. The informal learning practices were considered to be the learning that occurs, with or without awareness or intention, that is incidental to task accomplishment in the context of performing one's job. Thus, the informal learning these researchers were investigating was of a largely interpersonal, experiential nature. This learning lacks *design*, in that it is usually without an objective criteria for the outcome or the means of learning, which increases the liklelihood of undetected error and dysfunction.

Subjects were individuals in three large organizations, a metropolitan teaching hospital, a high-technology manufacturing firm, and the central headquarters of a state agency. In each of these organizations, human resource development (HRD) personnel were represented in departments variously referred to as the Centralized Education Department, the Training and Development Department, and the Organization Development Department. There is considerable role and task diversity in human resource development positions, ranging from delivery of training to curriculum development to internal consulting functions to managerial and support activities. Subjects responding to questionnaires represented all these functions. Through the director of each site's department, approximately one-third of the staff were asked to participate in the study. Responses were obtained anonymously from 48 respondents.

Instrumentation

Three items in the Learning Practices Audit each present a dialogue between two individuals about a work related issue. These dialogues were designed to typify certain interactions that might occur in the workplace and had a format like the case dialogue that Argyris uses, with the words on the right side of the paper and the left side blank. Respondents to the questions are asked to imagine they are one of the participants in the dialogue (identified as "You") and to speculate what thoughts and feelings they might have if they were actually involved in the conversation. The item then ask them to write down, next to each part of the dialogue, what thoughts and feelings they would have but choose not to express to the other person.

Dialogue 1

You: I want to check with you about getting travel authorization to go to the XYZ conference next month.

Sup.: Gee, I don't know. This doesn't seem to be the best time for that sort of thing. Our travel monies aren't what they were last year and we're just going to have to be watching things closely.

You: I know that, but I haven't gone anywhere in over six months and this is going to be a big event.

Sup.: What do you expect to gain from it? Is there anything that you could get out of it that would be of immediate benefit?

You: I always like to keep up with the latest trends and developments. There will be some big names presenting and the vendor exhibits are always interesting.

Sup.: We need to maximize our dollars right now. In addition, you know our work load is pretty high . How would you manage that?

You: I can cover that. I've got plenty of time to get caught up on things before I go, but if you don't think it's a good idea, I understand.

Dialogue 2

You: I've got a problem maybe you can help me with. I need to know everything I can about __________ by next week. Do you know anything about it?

Colleague: That sounds like a big problem. I have no idea where you might find anything out about that.

You: Didn't you go to that workshop a few months ago that got into some of that information?

Colleague: Yes, but I really didn't get much out of it. I think I do have some of the materials from it though. I'd be glad to dig them out for you.

You: That would be great. At least it would be a starting point. When can I get them from you?

Colleague: I'll try to get them to you tomorrow. It may or may not be much of a help, but you're welcome to it.

You: Thanks a lot. I really do appreciate it.

Dialogue 3

Other: Have you heard about the new policy changes that are happening?

You: No, well I did hear that the board was discussing a new ten year plan.

Other: I don't know exactly how it will turn out, but we are going to have to implement it pretty quickly with as little disruption as possible.

You: I'm willing to do whatever it takes to help out.

Other: I don't have all the information, but it may mean some new job responsibilities and reporting structures.

You: Do you think that will include me?

Other: I don't know at this point. There's a meeting scheduled for next week to cover all this and some memos will also be coming out beforehand.

Content Coding

Responses to these dialogues were coded with respect to three categories:

(1) Attributions made about the outcome of the interaction.

This was coded negatively if the respondent indicated an expectation that the result of the interaction will be counter to her intentions or desires. Examples include comments like "I never get what I want", or "I won't get any help from this person." Positive coding was given if there was an expressed anticipation of a favorable result such as, "I'll try a different strategy until I get what I need", or "This might mean a promotion for me."

(2) Attributions made about the other person.

A negative rating was given for this category if there was an indication that the other person lacks a positive personality trait, possesses a negative one, or is attempting to serve her own interests at the expense of the respondent's. Examples include "You only do things for your cronies", or "He was probably sleeping on the job." Positive examples would include "It seems like he wants to help", or "I'm glad she brought this up to me."

(3) Assumption testability.

This category was rated negatively if the respondent indicated that the situation is the same as a previous one so that she understands the parameters as well as the probable outcome, and may therefore be closed to further inquiry. Examples would be "This is the same old thing", or "I know what will happen." Positive ratings were given for indications of a suspension of unequivocal interpretation of the situation, such as "Changes are good but there could be layoffs", or "Is the timing right for this now?"

Results

A tabulation of the response coding is presented in Figure 1. Positive ratings were relatively uncommon. A substantial number of responses could not be coded in either direction, so were given a "neutral" rating, suggesting a need for refinement of the coding criteria or modification of the dialogues, or both. Moderate correlations among the rating categories existed (r's of .27 to .31, p=.03), as might be expected. However, positive attributions were not related to a measure of job satisfaction, as was the testability stance (r=.25 p=.08). The most important findings relevant for this discussion are that respondents did not react to these dialogues in the same way.

	Positive	Negative	Neutral (uncoded)
Attribution of outcome	21 (14.6%)	56 (38.8%)	67 (46.5%)
Attribution of other	46 (31.9%)	52 (36.1%)	46 (31.9%)
Assumption testability	30 (20.8%)	47 (32.6%)	67 (46.5%)

Figure 1.

AN EXPLANATORY AND NORMATIVE MODEL

These stimulus items (the dialogues) are arguably without an affective valence, so that the response of reacting negatively or positively to them is determined by factors that the respondent brings to the situation. This response variability then, must be due to variability in their experience, to possibly inborn temperaments, or to reactions to experience that have been learned. Whatever explains the variability, it reflects differences in a fundamental orientation or belief system that informs the responses. If we accept a normative value that positive outcomes are desirable, and that positive motives are desirable, then a functional orientation (compared with dysfunctional) would be to maximize the potential for positive outcomes and motives. If negative outcomes and motives are assumed, and the assumptions are incorrect due to insufficient testing, then error occurs when positive motives and conditions for positive outcome exist. To change these incorrect assumptions would require some sort of test. A model is presented in Figure 2 to explain how this learning can occur in error and where inroads may be made to improve functioning. Adapted from the classical empirical hypothesis testing model, hypotheses are considered as interpretations (or at times attributions) that individuals make to explain their experience. While not presupposing that people are totally rational beings incapable of ignoring contradictory cognitions and evidence, it acknowleges a drive to make sense of experiences in terms of fitting them into the mental models of the world. Learning can be of a Type II nature if not tested or interpretations are not rejected, or of a Type I nature if testing rejects the interpretation. Either type is of course subject to error (Type I or Type II), and the consequences of error are significant to the degree that learning is likely to influence future behavior.

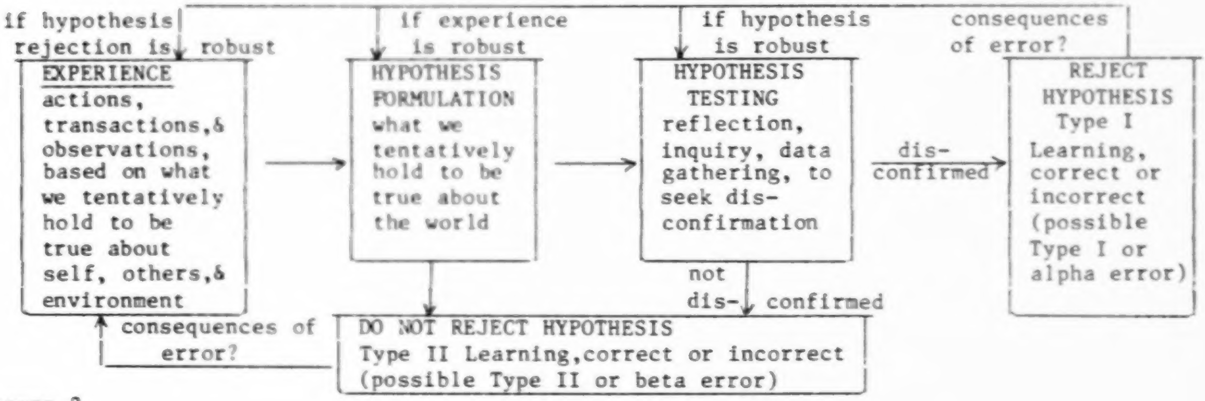
if hypothesis rejection is robust
if experience is robust
if hypothesis is robust
consequences of error?
EXPERIENCE
actions, transactions,& observations, based on what we tentatively hold to be true about self, others,& environment
HYPOTHESIS FORMULATION
what we tentatively hold to be true about the world
HYPOTHESIS TESTING
reflection, inquiry, data gathering, to seek dis-confirmation
dis-confirmed
REJECT HYPOTHESIS
Type I Learning, correct or incorrect (possible Type I or alpha error)
not dis-confirmed
consequences of error?
DO NOT REJECT HYPOTHESIS
Type II Learning,correct or incorrect (possible Type II or beta error)

Figure 2.

This model of experiential learning suggests that a key for decreasing the likelihood of error is in utilizing more powerful testing techniques (viz., Argyris and Schön), and being open to reformulation of hypotheses or interpretations. Some guidelines for this include:

1. Maintain a tentative stance. Without a dialectical approach, testing interpretations is problematic at best, because they would tend to be accepted, and even if in error, shape future behavior, and start on the road to becoming beliefs, much more difficult to change.

2. Have an initial positive orientation. Since an individual's current interpretation will to some extent affect their activities, and an interpretation once formed has less likelihood of being rejected than confirmed, positive attributions about outcomes and people would be subject to less error than negative ones. (This argument perhaps presumes fundamental values of the basic good of humankind and an external locus of control orientation.)

3. Test the interpretations. Public testing (inquiry) is more powerful than private testing (introspection). This can involve risk, both real and imagined, and necessitates attending to the words people say as, in Argyris' terms, data for inquiry. A useful framework for doing this in practice (in addition to having trusted "co-experimenters") is to state a problem in terms of a dilemma and ask for reaction.

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